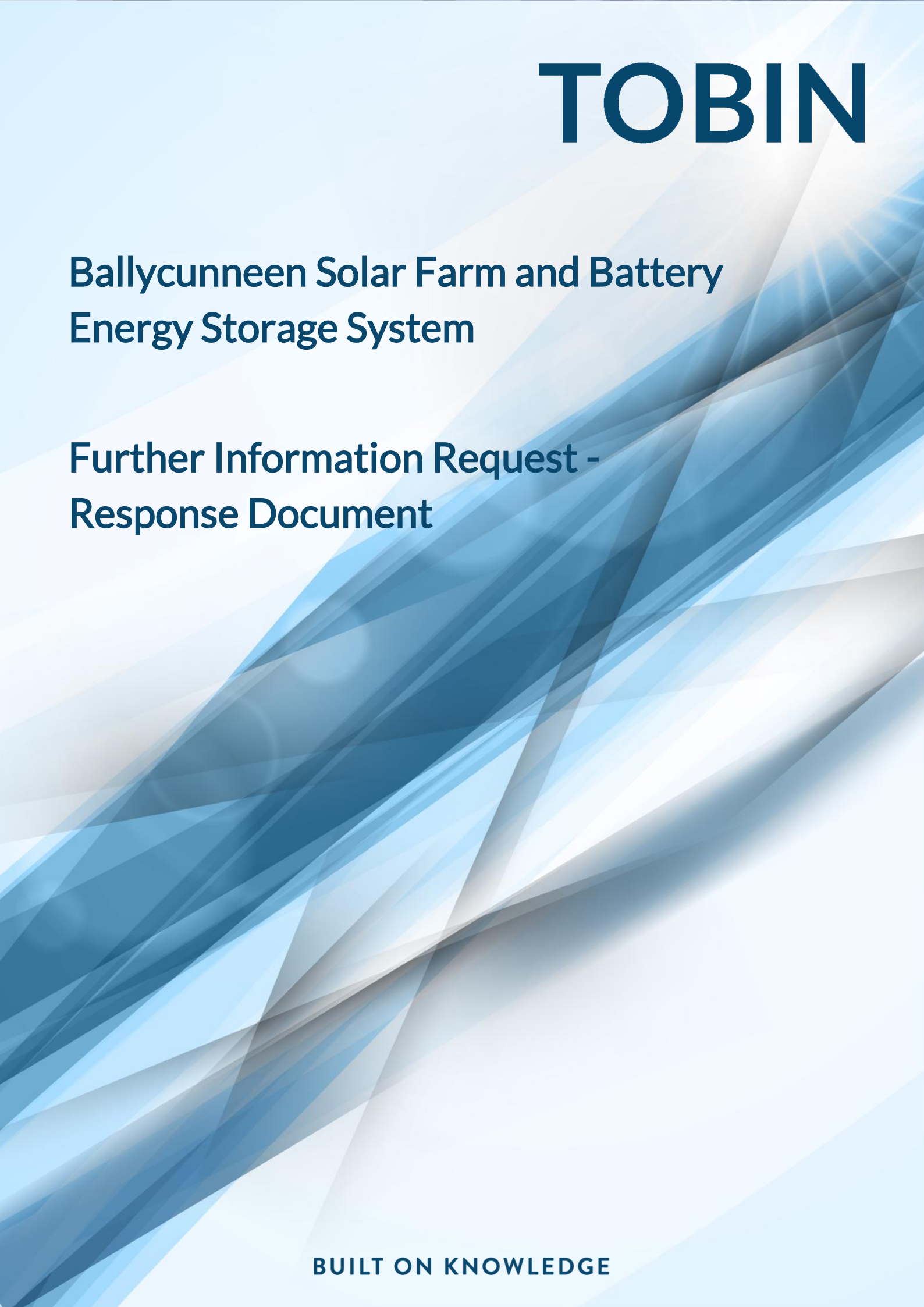




TOBIN

Ballycunneen Solar Farm and Battery Energy Storage System

Further Information Request - Response Document

BUILT ON KNOWLEDGE

Document Control Sheet	
Document Reference	Ballycunneen Solar Farm and Battery Energy Storage System – Further Information Response Document
Client:	BNRG Ballycunneen Ltd.
Project Reference	12099

Rev	Description	Author	Date	Reviewer	Date	Approval	Date
A01	Final	JCF	22/05/2026	JBD	22/05/2026	DH	22/05/2026

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1. INTRODUCTION

BNRG Ballycunneen Ltd. (the Applicant) applied to Clare County Council for planning permission for the development of a Solar Photovoltaic (PV) Farm and Battery Energy Storage (BESS) facility in the townlands of Ballycunneen, Drumline, Ballycasey More, Clonmoney West, Firgrove, and Ardkyle. The proposed development was applied for under Ref: 25/60560. A decision to refuse permission was made by Clare County Council on the 17th of December 2025. The Applicant made a First Party Appeal to An Coimisiún Pleanála (ACP) on 21st January 2026 under ACP case reference number PL-500676-CE-26.

A Further Information (FI) request was issued by ACP on 30th March 2026 and received by TOBIN on April 1st 2026. The ACP Further Information (FI) request raised a total of eight items.

Items 1-5 are in relation to Fire Risk Management, the associated Emergency Response Plan and the risk of firewater runoff and the potential downstream impacts on surface water and ground water in the area.

In particular, Items 1-5 highlight concerns that the original application lacked an evaluation of the potential fire risk of the (BESS) facility, and suitable preventative measures to mitigate such risk. The Commission also raised concern regarding the lack of an Emergency Response Plan (ERP), detailing a reactive strategy to deal with a fire event at the facility.

The issue of firewater runoff was also raised in the FI request with the Commission expressing concern over the potential for contamination of surface water and groundwater in the area. In summary Items 1-5 required the following by way of further information:

- Item 1 – Development of a Fire Risk Management Plan
- Item 2 – Development of an Emergency Response Plan
- Item 3 – Address the issue of firewater runoff and potential contamination risk to surface water and groundwater
- Item 4 – Details of on-site water storage and
- Item 5 – An updated NIS detailing reflecting additional mitigation in respect of the above.

The matters raised in Items 1-5 informed the preparation of the Fire Risk Management Plan (Appendix A), Emergency Response Plan (Appendix B), the updated layout and drainage detail of the Battery Energy Storage facility (Appendix C) and the updated Appropriate Assessment Screening & Natura Impact Statement (AASR-NIS), (Appendix D) all of which are included in this response to the FI request.

The ACP FI request also raised three items (numbered 6-8) in relation to ornithology, stating that additional information is required to enable ACP to determine the appeal.

In particular, Items 6-8 highlight concerns that the submitted bird survey data. The Items raised are:

- Item 6 – Bird Survey Coverage & Low Species Numbers
- Item 7 – Winter Bird Survey Deficiency
- Item 8 – Tidal Consideration in Surveys



Matters raised in Items 6–8 have informed the preparation of an updated AASR–NIS, which is now submitted to ACP. An ornithological survey report is also presented at part of this response and is included in Appendix E.

While this information has been incorporated throughout the revised assessment, for clarity, Section 1.1 through Section 1.8 below provide a breakdown of each item raised in the ACP FI, together with a breakdown of each issue and the corresponding responses addressing the queries identified.

1.1 ITEM 1 FIRE RISK MANAGEMENT PLAN

1.1.1 Summary

The ACP FI request seeks further detail regarding fire risk in the form of a Fire Risk Management Plan (FRMP). Specifically, it calls for preventative measures for potential causes of fire hazard and evaluate the associated risk of same. Specific measures to reduce the risk of a fire occurring onsite are also sought. ACP also requires the FRMP to explicitly demonstrate how the potential risk of a fire occurring on the site should be addressed.

1.1.2 Response

A FRMP has been prepared by Greenfire Solutions Ltd. and is included in Appendix A of this document.

The report finds that the Ballycunneen Solar & BESS development can be brought forward in a manner that is consistent with relevant planning, fire safety and risk management expectations, provided that the recommendations in the report are carried through into procurement, detailed design, construction and operation, and in doing so, fire-related risks arising from the BESS element of the proposed development are capable of being reduced to an acceptable level.

1.2 ITEM 2 EMERGENCY RESPONSE PLAN

1.2.1 Summary

The ACP FI request seeks further detail regarding the reactive strategy in the event of a fire at the facility. This should be in the form of an Emergency Response Plan (ERP) prepared by a suitably qualified technical expert / advisor.

1.2.2 Response

An Emergency Response Plan has been prepared by Greenfire Solutions Ltd. and is included in Appendix B of this document.

1.3 ITEM 3 WATER AND CONTAMINATION

1.3.1 Summary

The ACP FI request outlined concerns regarding firewater runoff describing it as;



A key environmental consideration during a fire event is the run-off of fire water into onsite and adjoining watercourses, including the Shannon Estuary. Further detail and mitigation is therefore required demonstrating that there will be no contamination of surface water or groundwater, that suitable catchment and containment measures would be in place for firewater runoff, and other potential firefighting substances and chemicals (such as foam), and that consideration has been given to potential downstream impacts.

1.3.2 Response

Grid-scale BESS fire protection does not rely on a single method. The BESS systems use a combination of monitoring, alarms, gas-based suppression to reduce risk.

Water or dry chemical extinguishers are not used to put out a fire. They are ineffective at cooling and can damage electronic equipment. It is proposed to utilise a multi-layered strategy including:

1. Emergency Response Planning (O) and Fire Risk Management Plan (Appendix A);
2. Separation distances – the proposed BESS is a containerised system with 3 to 8.4 m between containers. There is no vegetation within the BESS enclosure as the site will be finished in hardstanding or gravel surface;
3. Fire suppression material utilised in the containers;
4. Early detection using signature gases like Carbon Monoxide (CO), Hydrogen (H₂), Multi-Gas Detection (VOCs). The sensors are placed inside battery enclosures and connected to an aural alarm and automated emergency communication systems. They can detect a failure hours before a fire breaks out, providing a crucial window for intervention;
5. Inert gas is added to flood the sealed battery enclosure, flooding the space to chemically interrupt the combustion reaction; and
6. Water is only utilised to dampen down the boundaries (not the fire) therefore fire water is not generated.

In order to address the ACP FI, drainage details are added to the proposed BESS layout – See Figure 12099-2049 included Appendix C of this document. Water generated during the damping down will flow to the drainage network. Water generated can be reused repeatedly to reduce overall water demand. The water collected will be tested at the collection sump following the cessation of the fire event. Based on the testing, water will either be reused in the tanks on site or sent for disposal. All water will be contained on site.

The BESS location was identified to maximise the distance to any surface water stream. The BESS is over 430 m from the nearest stream and over 125 m from the nearest drainage channel.

1.4 ITEM 4 WATER SUPPLY

1.4.1 Summary

The ACP FI request sought details as to the proposed means of accessing an adequate dedicated water supply to facilitate the development and implementation of a rapid and effective firefighting response.



1.4.2 Response

It is proposed to utilise 4 No. 50m³ above ground water tanks on site A revised layout is presented in Appendix C of this document outlining the tank locations. Water from the drainage network and collection sump may be utilised to top up the tanks in the event of a fire.

1.5 ITEM 5 NATURA IMPACT STATEMENT

1.5.1 Summary

The ACP requested an updated NIS to reflect any additional mitigation, as may be required to address the concerns raised in Items 1-4 above.

1.5.2 Response

A revised AASR-NIS has been prepared and is presented in 0 of this document. Key revisions include:

- sets out the planning history of the project. It outlines the refusal of planning permission by Clare County Council, the subsequent appeal to ACP, and the issuing of a request for FI. It also summarises the specific requirements raised in the FI, including the need for additional information in relation to fire risk, and ornithological surveys.
- introduces new information addressing fire risk and emergency planning. This includes the preparation of a FRMP and an ERP, alongside associated mitigation measures such as firewater management and pollution control.
- expands the ornithological dataset collected from February to August 2025 by extending surveys through September 2025 to January 2026, thereby covering the full annual cycle and addressing previous gaps in autumn and winter data. During the February to August survey period, Curlew was the only SPA SCI species recorded within the site. Following the extended survey programme, both Curlew and Black-headed Gull were recorded between September 2025 and January 2026; however, their occurrence was limited and infrequent. These findings reinforce the conclusion that the site is of limited importance to SPA populations.
- includes a full list of survey dates and a new tidal analysis, demonstrating that surveys were undertaken across a range of tidal conditions, and confirms that the survey effort is representative and captures both foraging and roosting behaviour, and supports clearer conclusions of low site usage and limited reliance by SPA species.

While the overall conclusion in the original AASR-NIS of no adverse effect on the integrity of the European sites, either alone or in combination with other plans or projects, remains unchanged, the revised AASR-NIS presents additional evidence and justification to support the conclusion.

1.6 ITEM 6 – BIRD SURVEY COVERAGE & LOW SPECIES NUMBERS

1.6.1 Summary

It was noted in the ACP FI that the original application reported on bird surveys undertaken between January and August 2025. Concerns have been raised that these surveys do not



include the October–December period, which is important for capturing the arrival and departure of wintering bird species.

ACP noted that a total of nine bird species were recorded during the January and August 2025 survey period, including only one species (Curlew) listed as a Special Conservation Interest (SCI) species of the River Shannon and River Fergus Estuaries SPA. This is considered by ACP to be a relatively low number of species, particularly given the nature of the habitats present and the site's proximity to the SPA.

1.6.2 Response

- Surveys were undertaken between February and August 2025 as part of the original application to Clare County Council (Ref: 25/60560).
- Additional surveys were undertaken between September 2025 - January 2026.
- Collectively the surveys undertaken between February 2025 and January 2026 provide a full annual cycle dataset, capturing:
 - Autumn arrival of wintering birds
 - Peak winter usage
 - Early spring departure.

The entire survey programme covers a full annual cycle, thereby resolving ACP's concerns regarding the temporal representativeness of SPA species usage. Table 1.1 below provides the timing of surveys in relation to high and low tides in the Shannon Estuary. In addition, a report of all survey observation is presented in Appendix E.

1.7 ITEM 7 – WINTER BIRD SURVEY DEFICIENCY

1.7.1 Summary

It was noted in the ACP FI that the submitted surveys only cover the period January to August 2025, which may be insufficient as they do not include the October to December period, typically required to capture the arrival and departure of wintering bird species associated with the SPA. Given that part of the site (Land Parcel 4) lies immediately adjacent to the SPA, this omission is considered a potential deficiency.

1.7.2 Response

Following submission of the original application to Clare County Council on 11th September 2025 (Ref: 25/60560), monthly transect survey continued to cover the winter season and provide information of the bird assemblage over the full annual cycle. In summary survey results indicate low bird usage of the site (13 species recorded, dominated by common farmland and generalist species), with only limited and infrequent occurrence of two SPA SCI species (Curlew and Black-headed Gull), and no regular use by SPA species, confirming the site is of low ecological importance to SPA populations and largely functionally separate from adjacent estuarine habitats. Survey results for the full annual cycle are provided in 0 below.

1.7.2.1 Species Diversity and SPA SCIs

1.7.2.1.1 Recorded Species

Total species recorded during the February – August 2025 surveys increased from 10 to 13 following surveys September 2025 - January 2026, reflecting a broader seasonal representation including autumn and wintering species. The assemblage recorded over the full annual cycle was dominated by:

- Common farmland birds (e.g. raptors, gulls)
- Generalist wetland-associated species.

1.7.2.1.2 SPA SCI Species – Key Findings

Curlew was the only SCI species recorded within the site boundary during February - August 2025 surveys, with a single observation of a feeding flock of 51 recorded in Area 4 in February 2025. Curlew is classified as a species of high conservation concern in Ireland, being listed as Red on the Birds of Conservation Concern in Ireland (BoCCI) list. A flock of 10 Curlew was also recorded in Area 4 in November 2025.

Curlew occurrence within the site indicates a degree of functional connectivity between the site and the SPA, suggesting that adjacent agricultural lands may be used as supplementary foraging habitat. However, it is noted that only limited numbers and infrequent occurrences of Curlew were recorded within the site during the survey period.

Black-headed Gull was recorded on three occasions during the survey programme, with the highest abundance recorded in November 2025 within the coastal fringe (Area 4). Subsequent records in December 2025 and January 2026 comprised small numbers, primarily associated with Area 4, with a single inland observation (Area 3) in December.

1.7.2.1.3 Absence of Other SPA Qualifying Species within Site

With the exception of Curlew and Black-headed Gull, no other SPA qualifying species were recorded on the site, despite proximity to the SPA. This is a critical finding in Appropriate Assessment terms, as it indicates:

- Low direct usage of the site by SPA populations
- The site is not functionally important for maintaining SPA conservation objectives.

1.7.2.1.4 Habitat Usage at Area 1 through Area 4

This section provides a broad habitat-based classification of the survey areas, grouping Area 1–3 as inland agricultural lands and identifying Area 4 as the coastal fringe adjacent to the Shannon Estuary, in order to contextualise the observed distribution and frequency of bird species across the study area. This builds on the species diversity and SPA usage patterns outlined above, highlighting the strong influence of habitat type and proximity to estuarine environments on bird usage across Areas 1-4. The limited SPA SCI bird activity and low species diversity recorded within inland sites (Areas 1–3) are consistent with their agricultural character and distance from suitable wetland habitats. Although Area 4 is located adjacent to the estuary, its use by SPA species is limited, with only occasional and transient usage by estuarine birds, primarily during high water, reflecting their reliance on intertidal habitats for foraging.



Inland Areas (Area 1–3)

- Areas characterised by:
 - Improved grassland
 - Agricultural grazing
 - Hedgerows and limited forestry
 - Located 800 m to >4.5 km from the coast
 - Provide unsuitable habitat for most SPA waterbirds, which depend on mudflats, estuaries, and saltmarsh.
- Interpretation:
 - Low species diversity and negligible species usage considered ecologically typical.

Coastal Fringe (Area 4)

- Areas characterised by:
 - Area immediately adjacent to estuary but separated by road and narrow grass strip (15–200 m)
- Interpretation
 - Occasional use by:
 - Curlew and gull species
 - Most SPA species remain within estuarine habitats feeding primarily on exposed mudflats, moving offshore or to roost sites on rising tides.

1.8 ITEM 8 – TIDAL CONSIDERATION IN SURVEYS

1.8.1 Summary

The ACP FI requested clarification on whether the bird transect surveys for Land Parcel 4, located immediately adjacent to the SPA, were undertaken across different tidal states. This is necessary to confirm that the surveys adequately captured species movement, foraging behaviour, and high-tide roosting patterns potentially associated with the designated site.

1.8.2 Response

Access to the site was at times constrained by the presence of livestock, requiring coordination with landowners to facilitate entry (e.g. unlocking gates or moving animals). As a result, the timing of transect surveys was not formally structured around tidal cycles and was partially influenced by access availability. However, the timings for the full annual cycle of surveys did cover a wide range of tidal conditions on the study area adjacent to the Shannon tidal estuary. The timings of each of the surveys at Area 4, in relation to High to Low tides are shown in the Table 1.1 below and in Table 3.1 of the revised AASR-NIS.

The transect surveys undertaken across the full annual cycle covered a range of tidal states, including low tide, mid tide (both rising and falling), and mid-to-high tide conditions. Several surveys coincided with falling tides, capturing conditions associated with active foraging, while others were undertaken during rising tides, including mid-to-high stages, which are more



representative of transition periods and potential movement towards roosting areas. Surveys were also conducted at low tide and low-rising conditions

Overall, the full annual cycle of monthly surveys encompassed a representative spread of tidal conditions, allowing for the observation of bird movement, foraging activity, and potential high-tide roosting patterns across the site.

Curlew, a SCI species of the River Shannon and River Fergus Estuaries SPA, was recorded within the site during surveys undertaken in February and November 2025, and all records were confined to the coastal fringe (Area 4), which lies adjacent to the estuary.

Use of the site by Curlew was limited and intermittent, with observations tied to specific survey events rather than consistent presence. The most significant record occurred in February 2025, when a feeding flock of 51 Curlew was recorded in Area 4 during a mid-falling tide, representing the highest level of site usage recorded during the study. The flock was at Area 4 for a short time (10mins) before moving east to agricultural lands outside of the proposed project site.

A further, lower-level record was made in November 2025, when 10 Curlew were observed in Area 4 as part of a mixed feeding flock that also included several gull species; this survey was undertaken during a mid-rising tide for a short period.

No Curlew were recorded in the more inland survey areas (Areas 1, 2 and 3), indicating that use of the site is restricted to lands immediately adjoining the estuary (Area 4) and does not extend into the wider agricultural areas of the site. The proposed solar panel layout at the coastal fringe Area 4 incorporates a setback of infrastructure from the SPA boundary, thereby maintaining separation between development and the area of occasional Curlew activity and further reducing potential for disturbance or habitat interaction. Curlew was observed at Area 4 on 2 No. occasions over the full annual cycle.

Overall, these observations indicate that while Curlew do occasionally utilise the coastal fields within the Area 4 site for foraging, this use is sporadic and variable, with a single notable peak (51 individuals foraging for a short period before relocating outside of Area 4) and low number of 10 individuals in November 2025. The absence of regular or widespread records, combined with the restriction of activity to Area 4, suggests that the site does not represent a consistently important or critical habitat for Curlew within the SPA context, but rather provides opportunistic, peripheral foraging habitat linked to conditions in the adjacent estuary.

Black-headed Gull, a SCI species of the River Shannon and River Fergus Estuaries SPA, was recorded on a limited number of occasions during the full year survey programme. All observations were primarily confined to Area 4 (flock of 110 in November 2025 during mid, rising tide; 3 individuals in December 2025 during mid, rising tide; 7 individuals in January 2026 during low tide) with only one overflight record at Area 3. Overall, the species exhibited low levels of activity within the site and there was no evidence of consistent or regular use across the survey period.

Where recorded, Black-headed Gulls were observed utilising the coastal pasture fields within Area 4 for foraging, typically either singly or in small numbers, and occasionally forming part of mixed-species flocks with other gull species such as Common Gull and Lesser Black-backed Gull. A single higher number of was recorded in November, with a larger flock observed; however,



this likely represented a short-lived and isolated occurrence rather than a pattern of sustained site use.

Observed behaviour was generally transient, with birds present for short durations before moving between the site and adjacent estuarine habitats. This pattern is consistent with opportunistic feeding behaviour linked to tidal cycles, with the species using feeding opportunities in coastal fields during periods when intertidal mudflats are submerged or subject to disturbance. The absence of regular use of the site recorded during surveys, and the lack of any significant inland distribution (Areas 1–3), indicates that the site unlikely forms a core foraging or roosting resource for this species.

Table 1.1: Survey times in relation to High to Low tides on the adjacent Shannon Estuary.

Survey Date	Area 1 - Time	Area 2 - Time	Area 3 - Time	Time of High Tide / Low Tide at Limerick Dock	Area 4 - Time	Tide State during surveys at Area 4
29 th January 2025	Scoping survey					
5 th Feb 2025	11:25 – 12:05	12:15 – 13:25	13:35 – 14:25	H 11:43 L 18:24	14:40 – 15:00	Mid, falling
12 th Mar 2025	08:40 – 09:15	09:05 – 10:10	10:20 – 11:15	H 05:41 L 11:53	11:25 – 11:40	Low
5 th Apr 2025	13:30 – 14:05	14:10 – 15:10	15:20 – 16:15	H 13:23 L 19:59	16:30 – 16:50	Mid, falling
5 th May 2025	13:40 – 14:10	14:15 – 15:25	15:40 – 16:25	H 14:34 L 21:16	16:40 – 16:55	Mid, falling
4 th Jun 2025	08:50 – 09:25	09:30 – 10:30	10:40 – 11:30	L 08:56 H 14:52	11:40 – 11:55	Mid to Mid-High, rising
18 th Jul 2025	13:25 – 14:00	14:05 – 15:35	15:40 – 16:25	H 13:16 L 19:54	16:35 – 16:50	Mid, falling
1 st Aug 2025	07:35 – 08:00	08:05 – 08:55	09:10 – 09:55	L 06:36 H 12:46	10:05 – 10:20	Mid to Mid-High, rising
21 st Sept 2025	11:35 – 12:10	12:15 – 13:10	13:25 – 14:25	H 07:24 L 13:18	14:45 – 15:00	Low, rising
21 st Oct 2025	08:30 - 09:15	09:20 - 10:15	10:25 – 11:30	H 07:23 L 13:20	11:45 – 12:30	Mid Low, falling to Low
7 th Nov 2025	14:20 - 14:55	15:05 – 16:00	16:10 - 16:45	L 13:25 H 19:55	16:50 - 17:00	Mid, rising
30 th Dec 2025	08:55 – 09:25	09:30 - 10:20	10:30 – 11:15	L 09:04 H 14:45	11:25 – 11:40	Mid, rising
31 st Jan 2026	09:05 – 09:30	09:35 – 10:15	10:20 – 11:10	H 05:11 L 11:39	11:20 – 11:35	Low



Appendix A FIRE RISK MANAGEMENT PLAN

Appendix B EMERGENCY RESPONSE PLAN

Appendix C PROPOSED BESS DRAINAGE

Appendix D APPROPRIATE ASSESSMENT SCREENING & NATURA IMPACT STATEMENT

Appendix E SURVEY REPORT

