



# SEA – Shannon Estuary Activities

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# SEA — Shannon Estuary Activities

- **SEA** is a Django-based web app that brings Shannon Estuary activities into one place. Users can discover providers, book sessions, find safe swim/kayak windows, and connect with buddies. It's mobile-friendly, fast, and safety-first.
- **Goals**
  - **One hub:** Centralise discovery and **booking** across multiple local providers.
  - **Safety first:** Show **tide and weather** status with clear Safe/Caution/Avoid guidance and optional alerts.
  - **Community:** Enable a **Buddy System** for swimmers/kayakers to create or join meet-ups and message each other.
  - **Easy navigation:** Offer an **interactive map** of swim entries, kayak launches, hiking trails, and cycling loops.
  - **Provider tools:** Let providers list activities, manage availability, and receive bookings.
  - **Quality & delivery:** Ship a **tested**, accessible, responsive app with **Django and PostgreSQL** and deploy on **Render**.



# Core Features



- **Central bookings** for multiple local providers (one account, many activities)
- **Buddy System** for swim/kayak meet-ups with date/time (Flatpickr) and messaging
- **Safety Panel** with tide and weather integration and clear visual guidance
- **Interactive map** of spots and trails (swim entries, kayak launches, hikes, cycles)
- **User accounts** with dashboard, saved locations, and booking history
- **Provider tools** to publish activities, manage schedules, and track bookings



# Tools & Technologies



- **Backend:** Django, Django ORM, PostgreSQL, Django auth & permissions
- **Frontend:** Django templates with HTMX, Bootstrap 5, Leaflet maps
- **APIs:** Weather (e.g., Met Éireann/Open-Meteo) and Tides (e.g., WorldTides/Open-Meteo Marine)
- **Testing:** Automated tests (unittest) for models, permissions, views, and API endpoints
- **Deployment:** Render Web Service with Postgres



# Progress to Date

## ➤ Map & Spots

- Leaflet map on Home; spots load via HTMX (/spots.json).
- Activities linked to locations

## ➤ Safety panel (API integration)

- safety app with /safety panel/ (Open-Meteo) /Safe /Caution/Avoid card.

## ➤ Activities vertical slice

- Provider, Activity, Booking system.
- Activities list with filters detail page.
- Availability (time slots) booking create with capacity checks.
- "My Bookings" page with cancel action .

# Progress to Date

## ➤ Auth & Accounts

- Login/Logout wired (django.contrib.auth.urls); logout POST form.
- Custom signup view/form; Bootstrap styling helpers; error handling.
- Redirects (next) respected in auth flows.

## ➤ Buddy system

- buddies app: BuddySession, BuddyParticipant, BuddyMessage.
- List (filters via HTMX), create session (Flatpickr datetime).
- Detail with join/leave (capacity Limit, HTMX) and live message thread.