Risk Assessment & Method Statement (RAMS)

Pop Up Beach — Paddle Pool / Splash Zone Add-On (2m extension to 12m × 6m footprint)

Document	RAMS — Pop-Up Beach Paddle Pool / Splash Zone Add-On
Version	1.1 — full multi-page issue
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Legislation	HSWA 1974; MHSWR 1999; MHOR 1992; PPE Regs 2002; PUWER 1998; COSHH 2002; Regulatory Reform (Fire Safety) Order 2005; RIDDOR 2013; CDM 2015; PWTAG Code of Practice; HSG179; BS EN 15288 where applicable; Water Supply (Water Fittings) Regs 1999; Private Water Supplies Regs 2016 where relevant.
Read with	Parent RAMS — Pop-Up Beach 10×6m (v1.0)

1. Scope & Description of Works

This RAMS covers the optional paddle pool / splash zone module added to the standard Pop Up Beach 10m × 6m installation. The add-on extends the external footprint by 2m on the right-hand side, giving an overall installation of 12m × 6m. The standard right-hand sand-retaining wall is swapped for a lower-level internal wall, creating a shallow, contained paddle / splash area along the side of the beach. The pool is **not** a swimming pool — it is a low-level paddle / splash feature with a maximum water depth of approximately 200mm.

Water is supplied from a mains water tap or street hydrant with the venue's / water undertaker's written permission and an approved backflow-prevention fitting. Water is changed regularly. For longer installations an optional inline filtration and circulation system can be fitted; where the module is staffed, water is chemically treated and tested daily in line with PWTAG guidance.

2. Key Parameters & Loadings

Parameter	Value	Notes
Overall external footprint (with add-on)	12.000 m × 6.000 m (72.00 m²)	Beach 10m + 2m splash module
Splash zone footprint	≈ 2.000 m × 5.696 m (≈ 11.39 m²)	Runs full internal depth, right side
Max water depth	≈ 200 mm (8")	Low-level paddle — not a swimming pool
Approx. water volume (full)	≈ 2.28 m³ (≈ 2,280 L)	11.39 m² × 0.20 m
Water mass (full)	≈ 2,280 kg (2.28 t)	1,000 kg/m³
UDL — water only	≈ 200 kg/m² (≈ 1.96 kN/m²)	Over splash zone footprint
UDL — incl. occupants (allowance)	≈ 2.8 kN/m²	Adds ≈ 0.8 kN/m² for users/equipment
Typical mall floor capacity	≥ 5.0 kN/m² (BS EN 1991-1-1)	VENUE CONFIRMATION REQUIRED in writing
Fill / refill source	Mains potable water or approved hydrant	Backflow prevention (WRAS Cat 5 AB air-gap)
Drain-down route	Foul drain or surface water — venue agreed	Treated water dechlorinated before discharge

Note: Where the installation sits on a suspended slab, mezzanine, raised deck or stage, the combined loading of beach plus water-filled splash zone must be confirmed in writing by the venue / structural engineer. Load-spreading 18mm ply must be laid beneath the pool tray on all suspended floors.

3. HSE 5×5 Risk Matrix

Risk score = Likelihood × Severity. Colour bands follow standard HSE guidance.

L\S	1 Negligible	2 Minor	3 Moderate	4 Major	5 Catastrophic
1 Rare	1	2	3	4	5
2 Unlikely	2	4	6	8	10
3 Possible	3	6	9	12	15
4 Likely	4	8	12	16	20
5 Almost Certain	5	10	15	20	25

Low (1–3)	Acceptable, monitor
Medium (4–8)	Reduce where reasonably practicable
High (9–14)	Additional controls required
Very High (15–25)	Stop, do not proceed until reduced

4. Risk Assessment — Paddle Pool / Splash Zone

Hazards specific to the splash-zone module. Read in conjunction with the parent Pop-Up Beach 10×6m RAMS. Persons at risk: P = Public, S = Staff/Crew, C = Contractors, V = Venue personnel.

Hazard	Who	Initial L×S	Controls	Residual L×S
Drowning / submersion of small child	P	15	Water depth limited to ≤200mm. Continuous trained attendant supervision when open. Parent/guardian must remain with child. No hidden zones. Module closed and covered when unattended.	4
Slips, trips & falls — wet surrounds	P,S	16	Non-slip pool liner (R11). Anti-slip matting on approaches. 30-min wet-floor inspection. Wet-floor signage. Towel-down station. Sand kept dry of pool perimeter by 300mm splash margin.	6
Drowning in unattended water (out of hours)	P	20	Pool drained or covered with rigid lockable cover outside opening hours. Module barriered off when staff not present. Venue night-security briefed.	4
Cross-infection / water-borne illness (RWI)	P	12	Water changed daily for untreated installs. For longer installs: filtration + chemical treatment per PWTAG. Daily chemical testing. Hygiene signage. Swim-nappies only. Faecal/vomit response protocol.	3
Chemical exposure — chlorine / pH adjusters	S	12	COSHH assessment and SDS on site. Lockable ventilated chemical bin away from public. PPE for decanting. Never mix products. Eye-wash bottle present.	3
Over/under-chlorination, pH out of range	P,S	12	Three-times-daily DPD photometer test when staffed. Free chlorine 1.0–2.0 mg/L, pH 7.2–7.6. Pool closed if outside range; corrective dose then retest.	3
Legionella in stagnant water / pipework	P,S	10	ACoP L8 considered. Pipework flushed before each fill. Standing water <24h if untreated; treated water maintained per PWTAG. Longer installs assessed separately.	3
Backflow / cross-contamination of mains supply	P,V	12	Fill via WRAS-approved Cat 5 AB air-gap or RPZ valve. Hose never submerged. Water Supply (Water Fittings) Regs 1999 complied with.	3
Hydrant misuse / unauthorised connection	S,V	12	Hydrant use only with water undertaker licence and metered standpipe. Trained operator. No connection without WRAS backflow device.	3
Electrical hazard near water	P,S	16	IP-rated equipment (min IP65). 30mA RCD on every circuit. Low-voltage lighting preferred within 2m of water. PAT tested. Cables matted. Competent electrician installs.	4

Hazard	Who	Initial L×S	Controls	Residual L×S
Manual handling — filling, draining, chemicals	S	9	Mains/hydrant fill — no manual carry. Drain via submersible pump to foul. Chemicals supplied in ≤5L containers. Team lifts above 20kg.	3
Sharp objects / debris in water	P	8	Skim and visual check at every changeover and pre-open. Daily strainer-basket clean. Closed-cover policy when unattended.	2
Cold-water shock / hypothermia	P	9	Water temperature monitored. Module closed below 18 °C ambient. Solar cover overnight in cool weather. Towels supplied. Short-session signage for very young users.	3
UV / sunburn around open water	P,S	6	Shade sails / parasols above splash zone. Sun-cream station. Hydration. Staff rotation.	2
Glass or food contamination	P	8	No glass, food or drink in splash zone. Signed and enforced by attendant. Separate consumption area on beach side.	2
Structural failure of pool tray / liner	P,V	12	Engineered modular tray; daily pre-open inspection for leaks, deflection and fixings. Internal lower wall fixed and braced. Load-spread ply beneath on suspended floors.	3
Flooding of venue from leak / overflow	V	12	Overflow weir to bucket / drain. Leak-detection mat under tray on sensitive floors. Water-level check. Isolation valve on fill line; fill never left unattended.	3
Entrapment in drain / suction fitting	P	15	All drains anti-vortex / VGB-style covers. No single-point suction. Pump auto-cut on cover removal. Daily visual check of fixings.	3
Lost or unsupervised child	P	12	Trained attendant present during opening. Maximum occupancy posted and enforced. Lost-child procedure per venue. DBS-checked staff.	3
Allergic reaction to chemicals / sun cream	P	6	Chemical list displayed. Hypoallergenic options where possible. First-aider on shift.	2
Fire — pump motor, electrical fault	P,S,V	10	RCD protection, IP-rated equipment, thermal cut-outs on pumps. CO2 extinguisher within 5m. Daily inspection of motor housings.	3
RIDDOR-reportable incident	P,S	8	Accident book. Statutory reporting to HSE. Near-miss culture. Drowning/serious harm escalation drill quarterly.	3

5. Water Quality & Chemical Testing (Treated Installs)

Where the splash zone is installed for more than 24 hours and is fitted with filtration and chemical treatment, water quality is managed in line with PWTAG Code of Practice and HSG179 principles. Testing is carried out by a trained, named Pool Operator. All readings are logged on the on-site Water Quality Log Sheet and retained for 5 years.

Parameter	Acceptable range	Test frequency (staffed)	Method	Action if outside range
Free chlorine	1.0–2.0 mg/L	Pre-open, midday, close (min 3/day)	DPD No. 1 photometer	Close pool; dose / dilute; retest after 20 min before reopening
Combined chlorine	≤1.0 mg/L (target ≤0.5)	3× daily with free chlorine test	DPD No. 3 photometer	Increase fresh-water dilution; shock-dose overnight per PWTAG if required
pH	7.2–7.6	3× daily	Phenol Red photometer or electronic pH meter	Dose pH-minus (sodium bisulphate) or pH-plus (sodium carbonate); retest
Total alkalinity	80–200 mg/L CaCO3	Weekly	Titration test kit	Dose sodium bicarbonate to raise; dilute / acid to lower
Water temperature	18–28 °C	Pre-open and midday	Calibrated thermometer	Close if <18 °C or >30 °C until corrected
Clarity / turbidity	Bottom of pool clearly visible	Continuous visual	Visual	Close immediately if obscured; investigate filtration / dose
Microbiological independent sample	ACC <10 cfu/mL; coliforms, E. coli and Pseudomonas absent in 100mL	Monthly	UKAS-accredited lab sample	Close pool; investigate; super-chlorinate; re-sample
Cyanuric acid (outdoor only)	≤50 mg/L	Weekly	Test strip / photometer	Dilute with fresh water if above limit

5.1 Chemical Handling & Storage (COSHH)

All pool chemicals are subject to a COSHH assessment held on site. Sodium hypochlorite (or stabilised trichloroisocyanuric tablets), pH-minus and pH-plus are stored in original labelled containers in a lockable, ventilated chemical bin, away from public access and separated to prevent reaction. Maximum on-site quantity is limited to one week's projected use. SDS are held in the site H&S; folder. Decanting and dosing is carried out only by the trained Pool Operator wearing splash goggles (EN 166), nitrile chemical gloves (EN 374), apron and FFP2 mask. An eye-wash bottle and 25L freshwater rinse container are kept within 2m of dosing point. Spillages are contained with the chemical spill kit and disposed of per SDS instructions.

5.2 Untreated (Short-Run) Installs

For installs of 24 hours or less, or where the module is supplied without filtration, water is supplied fresh from the mains / approved hydrant and fully drained at the end of each operating day. No chemical treatment is applied. Pre-open visual and turbidity checks are still carried out and recorded.

6. Method Statement — Splash Zone Sequence

Stage 1 — Pre-arrival

Site survey extended to confirm: potable water tap or licensed hydrant within hose reach; suitable drain point; written floor loading confirmation; RCD-protected electrical supply for pump; venue agreement to fill / drain schedule.

Stage 2 — Build

Standard beach erected per parent RAMS. Right-hand sand-retaining wall replaced with lower-level internal pool wall, mechanically fixed and braced. Modular pool tray and liner laid on protective membrane and 18mm load-spread ply on suspended floors. Drain fitting and anti-vortex cover fitted and inspected.

Stage 3 — Commissioning

Hose fitted with WRAS Cat 5 AB air-gap or RPZ valve. Pool filled slowly under attendance; fill never left unattended. Visual and leak checks at quarter, half and full. Treated installs are balanced, circulated for 20 minutes and tested before opening.

Stage 4 — Operation

Trained Pool Attendant on duty at all opening hours (1 attendant per ≤15 users unless site addendum increases ratio). Maximum occupancy posted. Continuous visual supervision of water. 30-minute housekeeping cycle. Chemical tests recorded 3× daily for treated installs.

Stage 5 — Daily close-down

Public excluded. Untreated installs: pool drained to agreed point. Treated installs: rigid lockable cover deployed, filtration left running on overnight cycle and area barriered. Chemicals secured. Site walk-down with venue night security.

Stage 6 — De-rig & reinstatement

Pool drained via submersible pump. Treated water dechlorinated with sodium thiosulphate to <0.1 mg/L free chlorine and pH 6.5–8.5 before discharge to agreed foul drain. Liner, tray and lower wall struck, cleaned and cased. Floor inspected jointly with venue.

7. PPE Schedule (Splash Zone Specific)

Item	Specification	When
Safety boots	EN ISO 20345 S3	Build / strike
Wellingtons / waterproof boots	EN ISO 20345 SB + water-resistant	Filling, draining, in-pool cleaning
Splash goggles	EN 166	Chemical dosing & testing
Chemical gloves	EN 374 nitrile	Chemical dosing & testing
Apron	Chemical-resistant	Chemical dosing
FFP2 mask	Disposable	Powder chemical handling
Hi-vis vest	EN ISO 20471 Class 2	Delivery, build, strike

8. Emergency Procedures

Incident	Immediate action
Drowning / submersion	Attendant retrieves user immediately, commences resuscitation if trained, calls 999 and notifies venue control. Pool closed pending investigation; RIDDOR notified where applicable.
Chemical splash to eye/skin	Irrigate with fresh water for 15 minutes minimum, refer to SDS and seek medical advice. For ingestion, do not induce vomiting; call 999.
Faecal / vomit contamination	Close pool, follow PWTAG Tech Note 51: remove contamination, vacuum, super-chlorinate, filter and retest before reopening.
Leak / flood	Isolate fill, deploy bunds / wet-vac, notify venue, dry and inspect floor.
Electrical fault near water	Isolate supply at RCD, do not enter water, evacuate area and contact competent electrician.

9. Briefing & Sign-Off

All operatives — and specifically the named Pool Operator and Pool Attendants — must read, understand and sign this RAMS prior to commencing work. A site-specific addendum is issued for each booking covering venue-specific fill / drain arrangements and floor loading confirmation.

Name	Role	Signature	Date