

Active Birth Pools

Manual Handling and Midwife Comfort Assessment

Extra-Wide Rim and Sculpted Cutaway Surround Compared with Narrow-Rim, Vertical-Sided Birth Pools

Prepared as a source-mapped procurement, manual-handling and maternity-ergonomics assessment

Core finding: Midwife comfort is a manual-handling control. Active Birth Pools reduce routine ergonomic strain by combining an extra-wide supportive rim with a sculpted cutaway surround that allows midwives to work closer to the mother. Narrow-rim, vertical-sided pools can increase reach distance, unsupported arm posture and bending over the pool edge.

Executive Summary

For midwives, manual handling risk around a water birth pool is often created less by a single dramatic lift than by repeated awkward postures: leaning over a high or vertical side, reaching across water, supporting a mother during entry or exit, holding an arm unsupported, twisting around fittings, and maintaining static positions during long periods of observation and care.

Active Birth Pools are designed to reduce these routine ergonomic stresses by giving midwives a more comfortable working interface with the pool. The extra-wide rim provides a broad, softly contoured forearm-support surface. The sculpted cutaway surround allows the midwife to get closer to the mother rather than being held away by a vertical wall. Together, these features help reduce bending, overreaching, unsupported arm postures and shoulder strain during routine care. [M1]

By contrast, many conventional birth pools are essentially large tubs with narrow rims and vertical sides. These forms may contain water adequately, but they can force staff to work at a distance from the mother. A narrow rim gives little comfortable forearm support, and a vertical side prevents the midwife from bringing the body close to the point of care. The result can be more leaning, reaching, neck flexion, back bending and static load on the shoulders.

The core manual-handling finding is that midwife comfort should be treated as a safety and procurement issue, not as a secondary design preference. HSE guidance on birthing pools specifically identifies manual-handling risks for midwives and auxiliary staff, and states that pool design should allow the midwife to get as close as possible to the mother and minimise bending and reaching over. Active Birth Pools address exactly that design requirement through the rim, surround, access geometry and unobstructed working space. [M3]

This document is written for maternity-service managers, midwives, manual-handling advisers, occupational-health teams, estates teams and procurement decision makers. It is not a substitute for a site-specific moving-and-handling risk assessment, but it provides a design-led framework for comparing Active Birth Pools with narrow-rim, vertical-sided alternatives.

1. Assessment Framework

Manual handling in water birth should be assessed across the full episode of use: preparing the room, assisting entry, observing labour, supporting maternal movement, monitoring the mother and baby, assisting exit, responding to emergencies, cleaning the pool and maintaining the surrounding area.

The assessment should consider the task, the load, the working environment and individual capability. In birth-pool practice, the load is not only the mother. It also includes the posture and body weight of the midwife when leaning, supporting, reaching, stabilising, cleaning or responding to events around the pool. [M4]

This assessment focuses on product geometry because geometry determines how close the midwife can work to the mother, how much support the rim provides, how far the midwife must reach, whether the arms can rest, whether the trunk can remain more upright, and whether staff can move freely around the pool.

The key comparison is between Active Birth Pools, which use an extra-wide rim and sculpted cutaway surround, and conventional pools with narrow rims and vertical sides. The question is not simply which pool is more comfortable. The

procurement question is which design better reduces foreseeable manual-handling risk during routine and emergency maternity care.

2. Manual Handling Risk in Water Birth Practice

Water birth creates a distinctive moving-and-handling environment. The mother is buoyant and mobile, the pool edge separates staff from the mother, the floor may be wet, the clinical episode may be prolonged, and staff must sometimes respond quickly while maintaining dignity and safety.

HSE guidance describes manual handling as transporting or supporting a load by hand or bodily force, including lifting, pushing, pulling, carrying or moving a person. It requires employers to avoid hazardous manual handling where reasonably practicable, assess unavoidable risks, and reduce risk so far as reasonably practicable. [M4]

In a birth-pool setting, complete avoidance is not always possible because midwives must observe, communicate, support, assist and occasionally intervene. Therefore, risk reduction depends heavily on product design, room layout, staffing, training and suitable equipment.

Routine manual-handling exposures include leaning over the pool to check progress, supporting a mother changing position, helping a mother enter or leave the pool, reaching to retrieve items, assisting after birth, cleaning the pool and preparing for emergency evacuation.

3. What HSE Guidance Says About Birthing Pools

HSE guidance for moving and handling in health and social care includes a specific section on birthing pools. It states that manual-handling risks to midwives and auxiliary staff arise from routine tasks carried out while assisting with births in pools. [M3]

The same guidance identifies likely risk factors: the position of the mother in the pool, the position of the midwife when carrying out tasks at the pool, and support given during the mother's entry into or exit from the pool. [M3]

Most importantly for procurement, HSE states that one risk-reduction measure is the design of the birthing pool, which should allow the midwife to get as close as possible to the mother and minimise bending and reaching over. This is the design principle that underpins the Active Birth Pools rim and surround geometry. [M3]

HSE also identifies environment, equipment, individual factors, other pool-related tasks and training as part of risk control. Product design is therefore one element of a wider safe system of work, but it is a foundational element because poor pool geometry cannot be fully corrected by training alone. [M3]

4. Midwife Comfort as a Clinical Safety Issue

Midwife comfort is not a luxury feature. A midwife who can work close to the mother, with forearms supported and the trunk more upright, is better positioned to provide sustained care without unnecessary strain.

Conversely, discomfort is a risk signal. If a pool forces staff to lean forward, reach across a hard vertical wall or hold the shoulders and arms unsupported for long periods, the task becomes more physically demanding. This may increase fatigue, reduce tolerance for prolonged care and make routine movements harder to perform consistently.

HSE guidance on awkward postures treats neck bending, back bending or twisting, raised unsupported elbows and awkward hand positions as relevant posture factors. These are precisely the exposures that pool geometry can either increase or reduce. [M6]

Active Birth Pools address these risks at the interface between staff and product: the rim supports, the cutaway brings staff closer, the smooth surround reduces pressure points, and the absence of obstructive rim-mounted fittings helps staff position themselves naturally.

5. Extra-Wide Rim: Forearm Support and Load Sharing

The extra-wide rim is one of the most important ergonomic features of Active Birth Pools. It gives midwives a broad, rounded support surface for the forearms, elbows and upper body during observation, communication, monitoring and hands-on support.

A wide rim changes the way the midwife's body is loaded. Instead of holding the arms unsupported while reaching across a narrow hard edge, the midwife can rest the forearms on a stable surface. This can reduce static shoulder loading, soften contact pressure and allow care to be delivered from a more balanced position.

The rim also provides a safer and more dignified interface for mothers during entry, exit and repositioning. When a mother can use the rim as a support surface, the midwife is less likely to become the primary physical support. This helps reduce sudden loading on staff during unpredictable movement.

In narrow-rim pools, the edge often functions as a barrier rather than a support. Staff may have no comfortable place to rest the arms, and the narrow edge can create pressure points. Over time, this can turn routine care into a sustained awkward-posture task.

6. Sculpted Cutaway Surround: Getting Close to the Mother

The sculpted cutaway surround is designed to reduce the distance between the midwife and the mother. This matters because reaching distance is one of the main drivers of awkward posture. The further the midwife is held away from the mother, the more the back, neck and shoulders must compensate.

By cutting away and shaping the surround, Active Birth Pools allow the midwife to work closer to the point of care. This supports a more upright trunk, shorter reach distance and better balance. It also improves visual contact and communication with the mother.

The cutaway design is especially important when compared with vertical-sided pools. A vertical wall blocks the midwife's knees and torso from coming close to the waterline, which pushes the upper body forward. Even a skilled midwife with good technique may be forced into a poor posture if the pool geometry creates the distance.

In practice, the sculpted surround should be assessed alongside room layout. Adequate working space around the pool, non-slip flooring, access for equipment and sufficient staff remain essential. The product shape, however, sets the baseline for how comfortable and close the midwife can be.

7. Narrow Rims and Vertical Sides: Why They Increase Risk

Narrow-rim, vertical-sided pools can appear simple and space-efficient, but their simplicity can conceal ergonomic problems. They tend to create a hard separation between mother and midwife. The midwife must lean over the wall rather than work into a shaped access zone.

The narrow rim provides limited support for the forearms and can place pressure on elbows or wrists. Where the rim is too narrow or sharp, staff may avoid resting on it and instead hold the arms unsupported. HSE's awkward-posture guidance identifies unsupported raised elbows as a relevant upper-limb risk factor. [M6]

Vertical sides also increase reach distance. To reach the mother, water surface or baby, the midwife may need to flex the back, crane the neck or twist from the waist. These postures are more problematic when repeated or held for long periods.

The issue is not whether a narrow-rim pool can be used safely in ideal circumstances. The issue is whether it makes safe working more dependent on individual strength, height, fatigue level, room layout and staff workarounds. A better-designed pool reduces reliance on workarounds.

8. Entry, Exit and the "Sit and Swivel" Principle

Entry and exit are predictable moments of manual-handling risk. A mother in strong labour may be tired, unsteady, in pain or focused internally. If the pool requires awkward climbing, high stepping or reliance on staff, the risk transfers to the midwife.

Active Birth Pools use the wide rim and step arrangement to support a "sit and swivel" method. The mother can sit on the rim, maintain controlled contact, swivel and lower herself into the water. This reduces the need for midwives to lift or heavily support body weight. [M1]

For exit, the same broad rim gives a stable transition surface. This can reduce sudden pull forces on the midwife and allows staff to provide guidance rather than become the main load-bearing support.

Narrow-rim or vertical-sided pools may make this transition less controlled. If the mother cannot comfortably sit, pause, turn and transfer weight through the rim, staff may need to provide more direct support. This can increase unpredictable loading and awkward postures.

9. Emergency Evacuation and Rare High-Risk Events

Emergency evacuation from a birth pool is rare, but it must be planned. The manual-handling risk is higher because the mother may be unable to assist fully, the situation may be urgent, and staff must coordinate movement in a wet environment.

Active Birth Pools are designed with extra-wide rims, internal support positions and unobstructed access to support planned evacuation methods. The wide rim can act as a transfer interface, while the absence of obstructive rim-mounted fixtures helps staff position themselves and equipment. [M1]

HSE guidance on health and social care moving and handling says risk assessments should consider emergencies and specify the equipment, techniques, staffing and environment needed to reduce risk. [M5]

Pools with narrow rims and vertical sides may create more difficult transfer geometry. A narrow edge is less useful as a supported transfer surface, and a vertical wall may increase the height and reach demands placed on staff.

10. Cleaning and Post-Use Manual Handling

Manual handling does not end when the birth is complete. Cleaning a pool can require bending, reaching, scrubbing, rinsing and drying. Poorly shaped pools can make cleaning a repetitive awkward-posture task.

Active Birth Pools use smooth, seamless contours and minimal fittings to support cleaning access. The wide rim and shaped surround also affect staff posture during cleaning, because staff can work into the shape rather than leaning over a hard vertical barrier. [M1] [M2]

Narrow-rim, vertical-sided pools can make the bottom and far side of the pool harder to reach. If staff have to stretch across the pool, bend deeply or twist while cleaning, post-use hygiene work becomes part of the manual-handling risk profile.

Procurement assessments should therefore include not only maternal entry, labour and evacuation, but also how the product is cleaned by staff of different heights and physical capacities.

11. Procurement, Training and Safe Systems of Work

A safer pool design does not remove the need for training, local assessment or safe systems of work. It does, however, make safe practice easier to achieve. Product design should reduce the physical demand of the task before training is used to manage residual risk.

HSE's manual-handling hierarchy requires employers to avoid hazardous handling where reasonably practicable, assess risks that cannot be avoided, and reduce risk. In procurement terms, this means choosing equipment that reduces foreseeable bending, reaching, twisting and unsupported load. [M4] [M5]

Midwives should be involved in specification and selection because they understand the practical work. HSE specifically notes that involving midwives in equipment specification and selection helps ensure equipment is suitable and used appropriately. [M3]

A procurement assessment should therefore ask practical questions: Can the midwife get close? Can the forearms rest? Can the mother enter without staff taking her weight? Can the pool be cleaned without excessive stretching? Can emergency equipment approach the pool? Can staff move around the pool without obstruction?

12. Comparative Manual-Handling Assessment

The following comparison summarises the main ergonomic and manual-handling differences between Active Birth Pools and conventional narrow-rim, vertical-sided birth pools. It is qualitative because specific risk depends on room layout, staff height, mother's condition, staffing levels, training and local procedures. However, the underlying design differences are significant.

Comparative Assessment Table

Assessment factor	Active Birth Pools: extra-wide rim and sculpted cutaway surround	Typical narrow-rim / vertical-sided birth pool	Manual-handling implication
Midwife proximity to mother	Sculpted cutaway allows staff to work closer to the point of care.	Vertical side holds the body away from the waterline and the mother.	Shorter reach can reduce bending, twisting and shoulder load.
Forearm support	Extra-wide, rounded rim provides a broad support surface for forearms and elbows.	Narrow rim provides little support and may create pressure points.	Supported arms reduce static shoulder loading during prolonged care.
Back and neck posture	Closer access supports a more upright,	Leaning over a vertical side encourages	Reduced awkward posture supports

Assessment factor	Active Birth Pools: extra-wide rim and sculpted cutaway surround	Typical narrow-rim / vertical-sided birth pool	Manual-handling implication
	balanced posture.	trunk flexion and neck bending.	staff comfort and injury prevention.
Maternal entry and exit	Wide rim supports sit-and-swivel entry and controlled exit.	Narrow rim may not allow the mother to sit, pause and transfer weight comfortably.	Less reliance on staff taking body weight or reacting to sudden movement.
Routine observation and support	Midwife can rest, lean comfortably and stay close during extended care.	Midwife may have to hover, lean or hold arms unsupported.	Improves tolerance for long periods at the poolside.
Emergency evacuation	Wide rim and unobstructed access can support planned transfer methods.	Narrow edge and vertical wall provide less useful transfer geometry.	Better geometry supports rare but high-risk evacuation planning.
Cleaning posture	Smooth contours and access geometry support cleaning without excessive stretching.	Far surfaces may require deeper leaning and reach.	Cleaning becomes less physically demanding and more consistent.
Rim obstructions	Design avoids unnecessary rim-mounted obstructions where possible.	Fittings or narrow rims can limit staff placement.	More freedom to position the body close to the work.
Procurement value	Design addresses midwife comfort, manual-handling risk and clinical usability.	May be lower cost but can transfer ergonomic burden to staff.	Whole-life value includes staff safety and reduced strain, not only purchase price.

13. Conclusion

Manual handling in water birth is not limited to lifting. It includes posture, reach, support, balance, fatigue, cleaning and emergency readiness. Birth-pool design can either reduce these risks or embed them into daily practice.

Active Birth Pools offer a stronger manual-handling and midwife-comfort profile because the extra-wide rim provides practical support and the sculpted cutaway surround allows staff to get closer to the mother. These features directly address the HSE principle that birthing-pool design should minimise bending and reaching over by allowing the midwife to get as close as possible to the mother. [M3]

Narrow-rim, vertical-sided pools may appear simpler, but they can increase the distance between staff and mother, reduce forearm support, increase leaning and make routine care more dependent on individual workarounds. In a maternity environment, these differences matter.

The procurement case for Active Birth Pools is therefore not only maternal comfort or product durability. It is also staff comfort, safer posture, lower manual-handling exposure and better support for midwives during the routine, prolonged and sometimes urgent work of water birth care.

Appendix A: Source Mapping

The source mapping below links each marker used in the assessment to the supporting source, the evidence used and its relevance to the manual-handling and midwife-comfort argument.

Marker	Source	Evidence used	Relevance to assessment
M1	Active Birth Pools - Proprietary Materials, Innovative Ergonomic Design and Bespoke Engineering document	Describes extra-wide rims, integrated seating, recessed handgrips, safer entry, sit-and-swivel principle, emergency evacuation geometry, unobstructed access and ergonomic design for midwives.	Supports Active Birth Pools product-design and midwife-comfort claims.
M2	Active Birth Pools Sustainability and Life Cycle Value Assessment	Describes seamless one-piece Ficore construction, durable surfaces, minimal fittings, cleanability, repairability and whole-life value.	Supports cleaning-related manual-handling and product durability context.
M3	HSE - Moving and handling in health and social care: Manual handling in birthing pools	States that birthing pools create manual-handling risks for midwives and auxiliary staff; identifies risks from mother and midwife position; states pool design should allow midwives to get as close as possible and minimise bending and reaching over.	Primary external authority for birth-pool-specific manual-handling risk.
M4	HSE - Manual handling at work: Overview and assessment guidance	Defines manual handling and sets the avoid, assess and reduce risk hierarchy; assessment should consider task, load, environment and individual capability.	Supports legal and risk-assessment framework.
M5	HSE - Moving and handling in health and social care: Manage the risk	Explains moving-and-handling risk assessment, policies, equipment, training, emergencies, staff capability and the need to address awkward/static postures in care work.	Supports healthcare-specific safe-system framing.
M6	HSE - Awkward postures / Assessment of Repetitive Tasks guidance	Identifies neck bending, back bending/twisting, unsupported raised elbows and awkward wrist/hand positions as risk factors to assess.	Supports ergonomic analysis of rim support, reach and posture.
M7	NHS Employers - Musculoskeletal health in the workplace	Highlights the importance of reviewing manual-handling policies, procedures, equipment and staff training to protect staff health and safety.	Supports workforce health and procurement governance context.
M8	Example NHS water-birth guidance identified in public search results	Some local water-birth guidance explicitly includes manual-handling risk assessment before and during water labour and birth.	Supports the principle that manual handling is part of water-birth governance, not an optional extra.

Appendix B: References

M1. Active Birth Pools. Proprietary Materials, Innovative Ergonomic Design and Bespoke Engineering: Why Active Birth Pools Deliver Superior Safety, Value and Performance. Uploaded source document.

M2. Active Birth Pools. Sustainability and Life Cycle Value Assessment: Ficore Water Birth Pools Compared with Acrylic and Fibreglass Pools. Uploaded source document.

M3. Health and Safety Executive. Moving and handling in health and social care: Manual handling in birthing pools. <https://www.hse.gov.uk/healthservices/moving-handling/birthing-pools.htm>

M4. Health and Safety Executive. Manual handling at work. <https://www.hse.gov.uk/msd/manual-handling/index.htm>

M5. Health and Safety Executive. Moving and handling in health and social care: Manage the risk. <https://www.hse.gov.uk/healthservices/moving-handling/manage-the-risk.htm>

M6. Health and Safety Executive. Awkward postures: Assessment of Repetitive Tasks. <https://www.hse.gov.uk/msd/uld/art/awkpostures.htm>

M7. NHS Employers. Musculoskeletal health in the workplace. <https://www.nhsemployers.org/publications/musculoskeletal-health-workplace>

M8. Hywel Dda University Health Board / NHS Wales. Use of Water for Labour and Birth Guideline, June 2025, Appendix 4 risk assessment reference. Search result accessed June 2026.