



Creating a sporting habit for life



**Affordable Sports Centres
with Community 25 m Pool Options**

An essential reference for community sports centre projects.

The review follows on from previous Sport England publications on 'Affordable' swimming pools and sports halls.

Indicative Base Construction Cost to Sport England standards from £1,749 / m²

Base construction costs for 'Affordable' sports centres (4Q2014):

25 m swimming pool

+ sports hall

+ health and fitness gym

+ studios

£5.44m - £7.89m

Typical procurement period 2 - 2½ years from inception to operation

Potential community use income from £1.07m - £1.88m / year¹

Potential throughput over 560,000 users / year

¹ Subject to pricing, programme, site and operating assumptions.

Executive Summary

This guidance is a further development of Sport England's initiative to respond to the economic pressures faced by sports facility providers and operators. It builds upon the previous advice contained in *Affordable Community Swimming Pools* (January 2012) and *Affordable Sports Halls* (August 2012) for separate sports buildings. It brings them together to form an *Affordable Sports Centre* with a typical facility mix of swimming pool, sports hall and health & fitness facilities. The guidance highlights:

- Indicative design options and construction costs
- Estimates for income and operation
- The benefits of adding a secondary pool and enlarged health and fitness facilities.

The guidance is relevant to the early briefing and design stages of community and school and is intended to give a better understanding of the inter-relationships between design, capital cost, operating budgets and procurement. It is intended to supplement the current information on the Sport England web site and be an essential reference for new projects.

Whilst focusing on affordable sports facilities, the guidance also illustrates how a full range of community needs and good practice standards can be met. The design options that are illustrated are for buildings that can be used throughout the year and provide appropriate internal environmental conditions for community sports and teaching. The guidance takes into account the current Building Regulations and illustrates how the planning, design and construction processes can be simplified and speeded up.

Potential uses

The information will have a range of potential uses including:

- Developing feasibility studies and option appraisals
- Establishing a robust project brief
- Developing the business plan and operational budget
- Selecting a procurement route and project programme
- Validating key project details
- Forming a template for future projects.

Business Plan projections identify performance within the upper quartile of NBS³ benchmarks.

The key findings

The 'Affordable' indicative designs and cost plans are based on the use of a rationalised traditional building approach. Features that help drive down costs include:

- Clear understanding of 'peak' user numbers
- Efficient internal space planning
- Simple and uncomplicated building envelopes
- Low-weight composite cladding and structural frame
- Easily sourced and reliable prefabricated components
- A best value 'energy strategy'.

The significance of site specific factors and the potential for these to increase costs should also be noted as explained in the *Affordable Community Swimming Pools*, *Affordable Sports Halls* and *Affordable Sports Centres with Community 50 m Pool Options* guidance.

Options to enhance the building specifications are explained in the previous documents. The indicative designs should be tailored to the individual needs of a particular project.

The 'Affordable' approach should also be reviewed against the wider business objectives for the new facility. Enhancement may be justified to achieve lower life cycle costs and greater market appeal².

Cost effective designs and efficiently operated facilities can offer resource savings.

These can help improve specific health, wellbeing and demographic issues and the needs of local community groups.

² See Sport England's *Developing the Right Sports Hall*

³ National Benchmarking Service

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Introduction

Key issues

In the current economic climate, local authorities are under increasing pressure to cut costs. The creation of new or improved sports centres can make a positive contribution to the process. Facilities that better meet the needs of the community have the potential to save significant revenue costs when compared to existing older centres. Councils can benefit on a number of fronts. They can make efficiencies in spending, rationalise existing provision, make better use of land assets, whilst at the same time improving sports and leisure services for the community.

Options for 'Affordable' sports centres

This review has been produced by Sport England to help project teams develop an 'Affordable' sports centre. It looks at how sports centres can be logically and efficiently designed and delivered to provide functional spaces that encourage sports participation. It builds on the advice provided in the Sport England *Affordable Community Swimming Pools (ACSP)*, *Affordable Sports Halls (ASH)* and *Affordable Sports Centres with Community 50 m pools (ASC50)* documents and it should be read in conjunction with the Affordable suite of documents.

Four indicative design options are provided for a range of sizes and facility mixes. These are based on consultation within the sport and leisure industry and analysis of a number of recently built projects. They represent indicative 'Affordable' designs for a range of typical situations.

However, a detailed demand analysis should be undertaken for a new centre. This will help determine the scale and facility mix that best meets the needs of the particular location.

Joining-up previous 'Affordable' designs:

The previous Sport England publication ***Affordable Sports Halls*** illustrates how the larger version could be joined up with the 'Affordable' community swimming pool building. See ASH page 18.

<http://www.sportengland.org/facilities-planning/tools-guidance/design-and-cost-guidance/sports-halls/>

Summary facility mix for the 4 options

See appendix for a more detailed area schedule

| Options | A | B | C | D |
|---|----|-----|-----|-----|
| Sports hall | | | | |
| Courts (badminton) | 4 | 4 | 4 | 5 |
| Equipment storage | ● | ● | ● | ● |
| Dry changing | ● | ● | ● | ● |
| Swimming pool(s) | | | | |
| Main pool (lanes) | 4 | 6 | 6 | 8 |
| Secondary pool | - | - | ● | ● |
| Wet changing | ● | ● | ● | ● |
| Buffer/school/group changing | ● | ● | ● | ● |
| Changing places / full accessible provision | ● | ● | ● | ● |
| Health and fitness | | | | |
| Gym stations | 50 | 100 | 100 | 100 |
| Studio(s) | 1 | 2 | 2 | 2 |
| Changing with accessible provision | ● | ● | ● | ● |

Core facilities

The core facilities that are included in the range of indicative design options are discussed below. See the later Potential Income section for operational factors and impact on the running cost of a centre.

Entrance and reception

The entrance and reception are designed to give users some viewing of the internal sports areas. The reception is also the central hub for the operation of the centre with clear views of external and internal circulation routes. In addition, there is space for automatic ticket machines, a membership 'welcome' area, displays, automatic entrance barriers and vending.

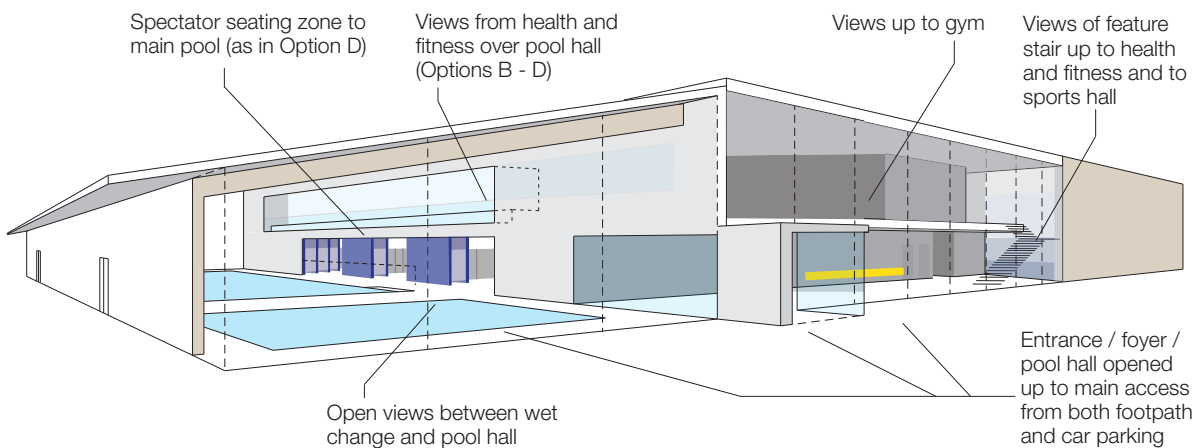


Swimming pool

The design options include for 4, 6 and 8 lane 25 m pools and for the addition of a secondary pool. The importance of a secondary pool for increased programme flexibility and income is discussed later.

Sports hall

The 4-court 34.5 x 20.0 x 7.5 m sports hall is to the recommended Sport England dimensions, along with a sports equipment store of 12.5% of the sports hall floor area. The larger design option allows a 5-court 40.6 x 21.35 x 7.5 m sports hall to be included in the economical rectangular plan.



Cut-away model view

(See cladding options in previous 'Affordable' documents)

Whilst sports halls should be designed predominantly for sports activities, they can be used for a range of other non-sporting events and activities at periods of low demand to ensure that the building is used as much as possible.

Health and fitness

Subject to catchment and local competition factors, a larger health and fitness centre with more stations will attract more 'members' and casual users, and improve the financial performance of a centre.



Dance studio(s)

Movement and dance studios are included in the larger schemes in association with the health and fitness areas. This can increase the range of offer to the fitness 'members' and a wider market.



Changing space

The review and design options have assumed changing room capacities on a similar basis to the previous 'Affordable' community swimming and sport hall documents. That is to say based on Sport England guidance notes, the need to provide comfortable conditions for all users and also cope with periods of high demand. In the case of the swimming pool the peak situation has been assumed to be a steady though put of casual swimmers (typically during summer school holiday periods) and the need for the operator to limit swimming sessions with 'call out groups' (see Swimming Pools Design guidance note).

Vending area

All of the proposed options have small vending areas included in the reception area. Additional space may be justifiable to create a larger catering facility, but this is unlikely to be based solely on the size of the centre. Factors such as the type of location, whether high street or in the countryside, the local competition and the user numbers all need to be assessed (see page 20 for discussion on Income generation).

Strategic Planning

The development of a sports centre that incorporates a 25m pool will require significant capital investment which will impact on finances for many years to come. It is therefore essential that all decisions are robust and based on evidence of needs.

A well designed multi-sport centre with a 25 m pool and a sports hall, in the right place, with the right programme has the potential to generate a positive return. However, the same facilities provided in an area that cannot sustain the scale of the facility will always be inefficient and could become a potential liability due to the high running costs of the pool. It is therefore essential that operators and stakeholders fully understand the swimming requirements and other sport requirements of their local community and are able to articulate them.

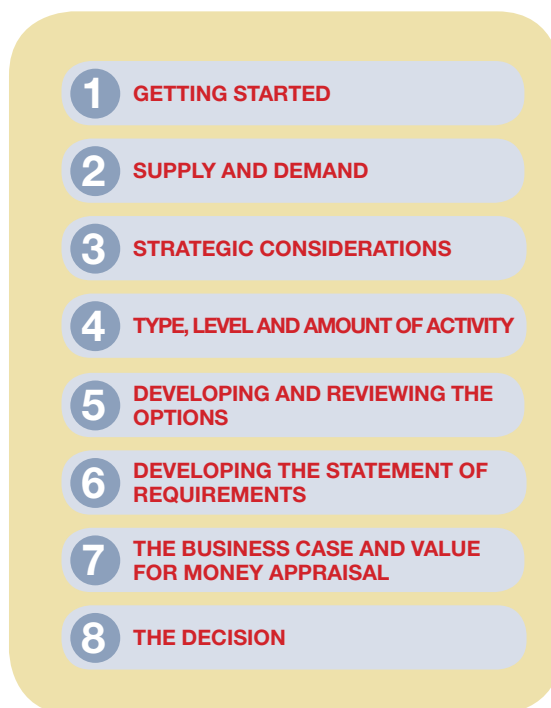
Sound decisions on the size of the pool(s), the number of lanes, the addition of a learner pool, whether a movable floor or boom is required, the size of the sports hall and the scale and type of changing are crucial. They should all be informed by a series of key questions that should be considered fully and at the right stage in the project development process.

To consider the swimming implications Sport England and the ASA have developed new guidance 'Developing the Right Swimming Pool' (DRSP), which provides an 8 step process to ensure the right swimming pool provision is delivered that meets local needs and that will be sustainable in the long term through clear, logical business and operational planning.

The 8 step process highlights the importance of a robust understanding of the existing pool provision and what the anticipated swimming demand is likely to be from the local community. The general demand anticipated from the community as a whole should be considered with a detailed understanding of the aquatic requirements:

- The type of aquatic activity, e.g. learn to swim, diving, water polo
- The level of performance, e.g. training, regional competition
- The amount of activity, e.g. hours per week.

The guidance explains who can help at each of the stages and helps to define the outcomes that should be reached. This 'Affordable' Sports Centre guidance will be particularly useful for projects when considering different options (stage 7) and making the critical final decisions at (stage 8).



Sport England and the key sports hall governing bodies have also developed a similar 8 step document called 'Developing the Right Sports Hall' (DRSH) to help consider the requirements of the sports hall.

Developing the Right Swimming Pool and Developing the Right Sports Hall

The guidance will help:

- Operators and stakeholders to understand and articulate the swimming and other sporting requirements of their local community
- Provide a 'step-by-step' process for project teams to gather information and develop a clear 'Statement of Requirements' for the pool(s) and hall(s). This can be handed on to the design team to develop a design brief and take forward the detailed design
- Ensure that the right swimming pool and sports hall provision is delivered that meets local needs and sustainable in the long term, through clear, logical business and operational planning.

Building Design

Efficient and effective design

The combination of a number of individual sports facilities into a multi-sports centre will give the potential for a range of economic, operational and social benefits. However, there are a range of design issues that will need careful attention. In particular, the size, capacity and functional relationships between the spaces, the organisation of circulation routes and detailed internal planning should be tailored to the programme of activities that is envisaged.

Cost effective designs and efficiently operated facilities can offer resource savings.

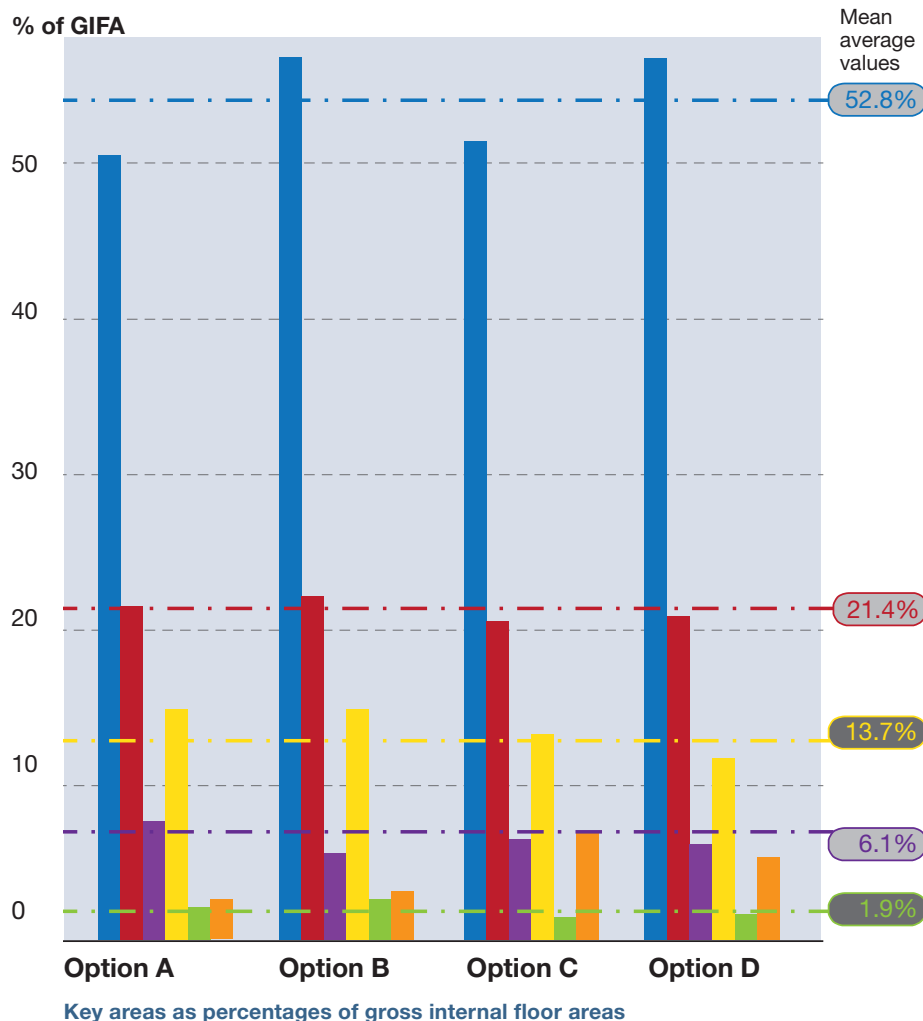
These can help improve specific health, wellbeing and demographic issues and the needs of local community groups.

For an 'Affordable' solution to be successful, the economies in the design of the buildings should be balanced with the need to maintain an appropriate level of customer appeal and efficient operation. This should be based on the levels of occupation during busy periods.

The review has compared the space allocations under the following six categories:

- Core Sporting Areas (CSA)
- Essential supporting areas (equipment storage, changing and sanitary)
- Foyer / circulation space / public toilets
- Internal plant areas
- Core management areas
- Other areas.

These are illustrated for the four building options in the graph below. The percentages and mean values can be used as a general guide for 'Affordable' projects with a similar mix of facilities.



Design process

The design of any sports building should come out of an understanding of how it is intended to be used and a response to the specific functional demands, local demographics and site considerations. These requirements are established in the project brief and, during the design development process, various options can be considered for how they might be met.

The design process is influenced by planning considerations, legislation such as Building Regulations and British Standards, client requirements, other requirements, recommendations, guidance and perceived good practice.

The Sport England Design Guidance Notes (DGNs) are key reference documents that set out specific requirements and guidance for the design of facilities to accommodate a range of sports. The DGNs are updated regularly to reflect National Governing Body of Sport (NGB) requirements and current best practice. The design guidance that they provide is taken by Sport England to indicate the minimum standards required to produce acceptable best practice solutions.

Variations to suit catchments and market conditions

Some elements of the DGNs such as the sizes of core sporting areas, certain functional space, health & safety and accessibility requirements should be taken as 'givens' for a particular standard of project. For example, dimensions of a 25 m x 4 or 6 lane pool or the width of doorways to an accessible toilet. However, other elements of supporting accommodation may need to be varied to best suit the particular local catchment and market conditions. Sport England recognises that there are situations where a variation from the general guidance may be justifiable. Where this is the case, a clear explanation with reasoning and implications should be set out in the project brief.

Phased development

The previous *Affordable Sports Halls (ASH)* review included the development of an indicative design for a phased development with a community swimming pool (see page 19 of ASH). The options illustrated could be adapted for a phased project.

Alternative building configurations

There are a number of ways that the building may be configured to suit particular site constraints or particular building techniques. However, a number of critical inter-relationships between the main elements of the building should be maintained.

These include:

- Entrance easily identifiable
- Viewing from reception / entrance into the main activity areas to increase customer awareness
- Reception and control well located to provide direct access to the changing rooms
- The building split into separate wet and dry zones to facilitate easy operation
- Buffer / group changing rooms shared with the 'wet' and 'dry'
- Entries from wet changing areas adjacent to shallow water to reduce risks to non-swimmers.
- The changing rooms and plant areas arranged in a central core that avoids long corridors
- The reception desk is in a strategic location with good viewing of outside areas, entrance, and circulation routes
- Plant room being adjacent to the deep end of the swimming pool and changing rooms.

Design objectives

The key design objective is to produce compact and efficient sports centre layouts that provide elements in compliance with Sport England guidance. Ancillary areas have been reviewed and redesigned as necessary. The general objectives of the Sport England guidance have been applied, taking into account the likely requirements and typical brief of operators and based on previous feedback from those groups.

Grouped areas such as wet changing and dry changing areas have been formed with components which are able to grow in size and number proportionally as the facility size and user-requirement increases. This allows for a neat plug-in design process, with changing area, cubicle, shower and WC elements added in a consistent manner.

The indicative design options are based on the use of simple, compact and functional building geometry in the interests of keeping capital costs down.



View of entrance with indicative landscaping

Building layouts

The layouts aim to provide a suite of schemes that meet the needs of typical project briefs for a range of sports centre sizes. They adopt a common organisational model that can be expanded to produce multiple iterations and accommodate additional facilities elements, simply by adding components as may be required.

The layouts adopt a similar concept with the wet and dry changing areas, sitting in between the pool hall and sports hall. A circulation corridor runs front to back through the building at ground and first floor levels, adjacent to the sports hall. Vertical circulation for accommodation and means of escape is located at either end of this corridor.

The circulation routes are simple and efficient for ease of orientation within the building. The wet and dry-side changing is accessed by a single corridor which also provides easy access to dry side accessible sanitary areas as well. The dry changing facilities were designed for separate genders or teams, for flexible use.

The pool hall is located to be visible to people approaching the building and to have good viewing from the entrance reception area.

On the first floor, the gym is at the front of the building to give views of activity from the street, and to encourage interest and participation. The pools are designed for community use and the 8 lane option includes spectator viewing at first floor level.

The main corridor potentially provides views into the sports hall at ground and first floor. Similarly, the schemes without spectator seating are designed to potentially give direct views into the pool hall from the gym.

The plant areas have been located at the rear with air handling plant located on the roof.

The amount of changing and sanitary accommodation is compliant with the British Standards and the Building Regulations and follows the Sport England Design Guidance. The changing areas, showers and sanitary facilities have been located where the users will pass these areas as they move from changing to activity space to encourage their use. Consideration should be given to the provision of an area near the access to the pool changing for removal of shoes.

The health and fitness areas have been designed to operate separately from the swimming pool and sports hall to be used when the other facilities are occupied by schools or clubs. The health and fitness changing areas are located away from the other changing areas and sit in close proximity of the gym.

To access the health and fitness suite at first floor, there are two staircases (for access and fire egress) and disabled access is provided with two lifts in line with Sport England Design guidance. A feature staircase is to the front of the building with secondary escape stair(s) to the rear.

The feature staircase adds interest and movement via a glazed front, which has been designed to bring natural light and potential natural ventilation into the front reception areas and to offer a visual link with passers-by.

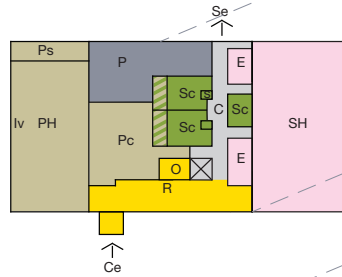
Options for combining the sports centre elements

Key

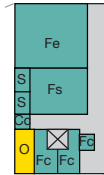
- Sports hall
 - Changing (+CH)
 - Health and fitness (+HF)
 - Swimming pool
 - Circulation / lifts
 - Reception zone / staff
 - Plant
-
- SH Sports hall
 - E Equipment store
 - Se Secondary exit / fire escape
 - Sc Sports hall changing and toilets
 - Ce Community entrance
 - Fc Fitness changing and toilets
 - Fe Fitness equipment gym
 - Fs Fitness studio
 - Fv Formal viewing
 - C Circulation
 - O Office / staff areas
 - R Reception
 - S Storage
 - Pc Pool changing zone
 - PH Pool hall
 - P Plant
 - Ps Pool store zone / first aid
 - Iv Informal viewing

Option A

25m x 4 lane swimming pool and 4 court sports hall with health and fitness facilities at first floor

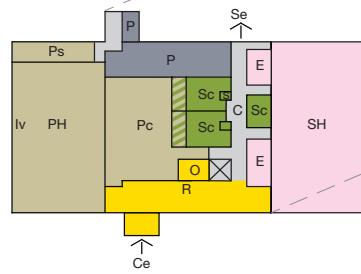


50 station health and fitness and studio at first floor level

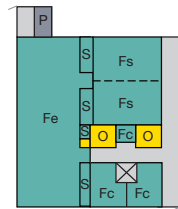


Option B

Larger swimming pool (25 m x 6 lane) and health and fitness facilities

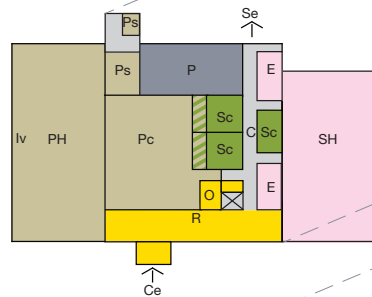


100 station health and fitness and two studios at first floor level

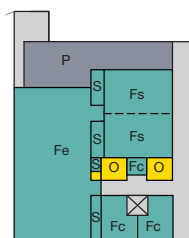


Option C

Option for a 25 m x 6 lane pool with secondary pool and 4 court sports hall

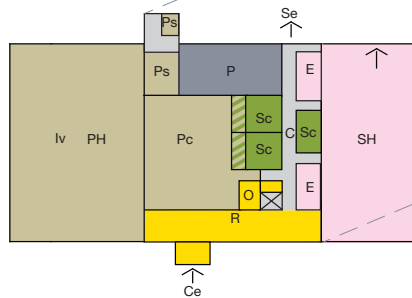


100 station health and fitness and two studios at first floor level

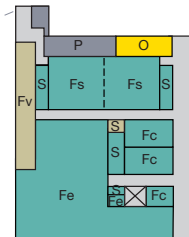


Option D

Option for a 25 m x 8 lane pool with secondary pool. With formal pool spectator viewing and 5 court sports hall



100 station health and fitness and two studios at first floor level plus spectator viewing



General provision

Pool changing

During the review, the current methodology for calculating changing room numbers for swimming pools has been carefully considered.

The current method is explained in the Swimming Pool Design Guidance Note and shows a worked example based on busy periods when there is a steady flow of swimmers coming into the building and a 'call out' system is used to limit numbers in the water and the length of the swimming sessions. It uses 3 m² / person, the maximum safe occupancy figure as defined by HSG 179 as a start point but allows different values to be used for the maximum occupancy of the pool water, times of swimmer in the pool, average time to change, places out of use for cleaning and the number of 'call out' groups.

These values will vary depending on the particular programmes of use and further, separate calculations can be carried out for individual areas of the pool water to identify the likely peak times in the changing areas. Nevertheless, this worked example is often treated as a general standard with the 3 m² factor being applied to all the water area.

Although this approach gives comfortable changing conditions for a community swimming pool facility, feedback from the marketplace suggests that reductions in pool occupancy and changing provision may be appropriate for some projects and should be considered on a case by case basis.

Any design of changing provision should be considered in the wider context of the project objectives and the potential impact on income levels, and customer perceptions of 'comfortable changing conditions'.

Irrespective of which calculation methodology is applied, it does not result in a significant reduction in the areas required. For this reason, the four indicative design options are based on the current methodology.

Lockers

The locker provision is in line with the Sport England *Swimming Pools Design Guidance Note* worked example, at 75% of pool occupancy, plus the number of changing places, plus an additional 10% of lockers which may be out of use at any one time. The buffer/group change doors can be locked or opened to allow additional changing spaces to be allocated to either the 'wet' or 'dry' changing areas.

Sanitary provision

Sanitary provision in the wet areas is based on BS 6465 Part 1: 2006 Table 12, based on the maximum safe pool occupancy and Sport England guidance.

Showers

The shower provision is also in line with BS 6465 Part 1: 2006 Table 12 as described above.

Accessible wet changing

Accessible wet changing provision is in accordance with the British Standards and the worked example in the Sport England guidance note. It includes a Changing Places room, a disabled changing room with a WC, an accessible shower, and an accessible disabled WC. Baby change provision, wheelchair storage areas and cleaners' stores have also been included.

| Areas of water (m ²) / person to calculate 'any one time occupancy' in calculation of changing places | Calculated numbers of changing spaces for a 25m x 6 lane pool (assuming an average changing time of 13minutes/person) |
|---|---|
| 3.0 (HSG 179 minimum area/person for safe swimming) | 32 |
| 4.0 (Marketplace feedback for lane swimming) | 24 |
| 4.5 (Marketplace feedback for aqua aerobics) | 21 |

Note:

- Separate calculations are required for the consecutive use of separate water areas and programme overlaps to calculate the peak use of changing rooms.
- A water area of 6m²/ swimmer is suggested as a general guide for comfortable swimming conditions

Table 1 - Overview of water occupancy and changing calculation criteria

Spectator viewing

Informal spectator views have been included in all options at ground level near the entrance and vending machine area. This looks into the shallow end of the pool, or the secondary learner pool when provided. For small scale local galas, a controlled access is provided to the poolside from this area to give some limited viewing from the pool surrounds. In the larger Option D, formal spectator viewing for approximately 80 people has been included at first floor level. This is accessed

via the lifts and circulation routes to the health and fitness areas. This spectator area is not focussed on use for competitions. Accommodation for formal competition will require more seating. For requirements, refer to relevant Sport England and ASA guidance. A larger spectator seating area could be created by making reductions to the health and fitness accommodation.

Sports chair zone

All areas of the building are designed to be accessible and suitable for users with normal width wheelchairs in line with Sport England guidance in Accessible Sports Facilities. At ground floor, a 'sports chair zone' has been created for the wider sports chairs with angled wheels that are likely to be used in the sports hall. The zone runs from the car park, entrance, reception to the sports hall and includes space for wheelchair storage and people to transfer from their day chair to their sports chair.

Dry side changing

The changing provision for the sports hall is based on two separate changing rooms of 30 people maximum capacity each. This allows them to be used for school groups and as a teaching space before and after a lesson as illustrated in *Affordable Sports Halls*. This will also cater for other user groups such as Badminton (sixteen people on four courts) and allow for overlap between sessions. The changing rooms are adjacent to buffer/group changing rooms in the 'wet' changing and can be linked to give additional capacity. This gives greater flexibility to cope with 'back to back' bookings of the hall, mixed-gender groups and team competitions.

The changing provision includes showers, wheelchair space and direct access to sanitary accommodation as Sport England guidance. In addition, separate unisex accessible facilities are located outside of the main changing areas for general use. WCs are designed in accordance with the female requirements, which are more onerous in occupancy to provide suitable sanitary accommodation for female only events.

Health and fitness changing

Sport England guidance for changing provision is based on an equal split between male and female users and the number of spaces calculated as 65% of the maximum occupancy. This assumes that many users will arrive already changed. However, marketplace feedback suggests that a greater reduction can be applied in some locations and 35% of the maximum occupancy has been used to represent a more typical scenario.

Similarly, the review has assumed a more intensive use of the gym and studio spaces and based user numbers on a maximum capacity of 5 m² per person for the studios and 4.5 m² per person for the gym (rather than the 7 m² and 5 m² respectively as mentioned in Sport England guidance). One shower cubicle is provided for every six changing spaces and a larger accessible shower cubicle is included. Accessible seating is also provided in both male and female changing rooms.

Further adjustments may be justified to suit particular market and demographic factors.

Location

The indicative design options have a footprint of between 2,361m² and 3,274m² (see area schedule in the Appendix) and will require additional space for pathways, car parking and landscaping to suit a particular site. The local planning requirement for the number of car parking spaces will be a key variable. The typical site plan for Option C shown on page 16 would need an approximate overall area of 8,000m² - 8,500m². The particular shape and dimensions of a site are likely to create a number of constraints that will affect the building and site layout. These constraints should be considered early in the project development process.

The particular characteristics and constraints of each individual site will need to be established. For example:

- Access
- Locations of services
- Orientation
- Landscape and townscape issues
- Geotechnical conditions.

All key factors should be carefully considered in order to 'tailor' the design sensitively for the particular location. This should include discussion and consultation with local Stakeholders and Planning Departments and all other work associated with RIBA Stage 3.

Building fabric

Similar to the *Affordable Sports Hall*, *Affordable Community Swimming Pool* and *Affordable Sports Centre with Community 50 m Pool* models, the building fabric is designed to offer a good compromise between cost, function and aesthetics.

The building is designed to be flexible so that the external materials can be altered to suit local site and planning requirements. The external walls could be formed using a simple insulated metal cladding panel or if a more aesthetically pleasing finish is required brick or render could be used.

More details on the external material specifications can be found in the Appendix.

The internal materials proposed are included in the schedule in the Appendix. These finishes are based on those used for the *Affordable Sports Halls* and *Affordable Community Swimming Pools*. However, the finishes have been uplifted in the public circulation and dry changing floor finishes reflecting the higher throughput that a local sports centre would expect. Veneered doors have been introduced to dry public areas in line with the increased 'quality' that would be expected of a building of this size, taking into account that it will primarily be a public building rather than associated with a school.

Structure

The structural design of the building should take into account the requirements of the Client's brief and the design requirements as developed by the design team, at all times considering cost and functionality. In addition, there are many further considerations and recommendations contained in Appendix 6. This Appendix provides more extensive design guidance for the building structure and drainage.

The 'Affordable' approach in this document for these design elements has assumed simplicity in structural design, a flat site with good ground conditions, a conventional steel frame and reinforced concrete pool tanks, surrounds and associated sub-structures.

In any significant construction project the greatest risks are usually associated with the below ground construction, therefore, for any proposed project, the key to developing robust initial budgets will be the early consideration of any site specific abnormal Structural / Civil Engineering constraints such as:-

- Site topography: changes in level can result in a requirement for retaining structures, although careful consideration of a building layout can use level changes to a projects advantage.
- Poor ground conditions can add significantly to costs and may result in piled structures and pool tanks.
- High water levels can add to the cost to structures to prevent floatation, add to temporary works and extend the construction programme of deep structures such as pool tanks and sumps.
- On brown field sites, contamination and the presence of existing underground services need to be determined as soon as possible.

- Sub-contractor design input may be required to clearly define layout and building constraints and will be required to determine the size of balance tanks and the outflow from the filtration backwash.

The structure must consider the special environmental conditions associated with swimming pools and the adjacent wet areas and take this into account in the choice of structural materials and their finishes.

With regard to drainage, as with any large building the early consultation with the relevant authorities will establish whether there will be significant costs associated with SUD's for surface water run-off. For the foul drainage the designer will need to consider the attention of flows from swimming pool filtration backwash.

Services

The building services design is to address the key issues of efficiency and robustness. Swimming pools require significant conditioning to control the internal environment while the services must be appropriate to the humid, chlorine laden environment. Appendices 7 and 8 contain a detailed commentary on the design of the building services and approach to controlling energy use.

The indicative sports centre designs have been tested for compliance with the current 2013 Building Regulations Part L2A 'Conservation of fuel and power in new buildings other than dwellings'. Compliance testing against the national calculation methodology has used integrated environmental modelling software. The basis of the compliant design is summarised below:

Key affordable assumptions

Pool halls (main and secondary)

HVAC

- Heating via a dedicated ventilation system
- Mixing air circulation for pool (ductwork at high level designed for modulation)
- Dehumidification via fresh air
- Plate heat exchanger.

Lighting

- Corrosion resistant IP65+
- Metal Halide floodlights
- Up and down lighting.

Changing rooms

HVAC

- Heating via a dedicated ventilation system
- Plate heat exchanger
- Openable high level windows for natural ventilation in summer where possible.

Lighting

- Corrosion resistant IP65+
- LED * bulkhead fittings or high efficiency fluorescent fittings.

Fitness suite and studios

HVAC

- Heating and cooling provided via dedicated ventilation system
- Comfort cooling provided by chilled waer or VRF system.

Lighting

- Recessed modular LED or high efficiency fluorescent fittings.

Sports hall

HVAC

- Gas fired radiant heating (LTHW radiant panels should be considered if a suitable low / zero carbon heat source is incorporated)
- Natural ventilation via louvred vents at low level and exhaust stacks in roof (with insulated modulation dampers).

Lighting

- High efficiency fluorescent impact resistant fittings.

Offices, staff room and circulation

HVAC

- LTHW radiators
- Natural ventilation via manual openable windows where possible, mechanical ventilation for internal spaces.

Lighting

- LED recessed downlighters or high efficiency fluorescent fittings.

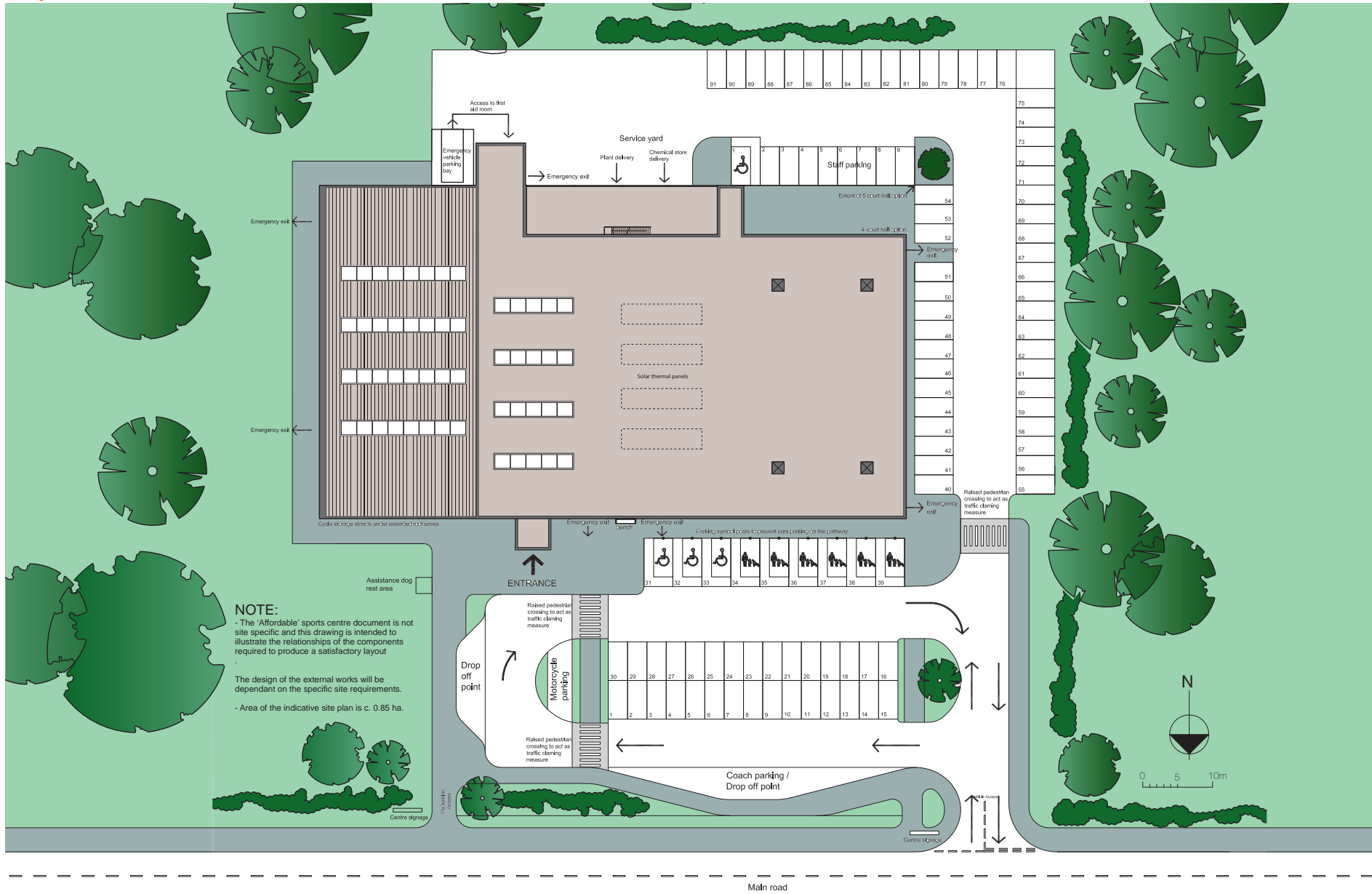
The layout of the 25m pool options allows adequate space at ground floor for filtration plant with a dropped pit within the plant room to house the circulation pumps below water level. The majority of the mechanical plant is also housed in the ground floor plantroom, with plant decks created in options C and D for air handling plant and a chiller. All Options include space on the roof for roof mounted air handling and chiller plant in addition.

BREEAM

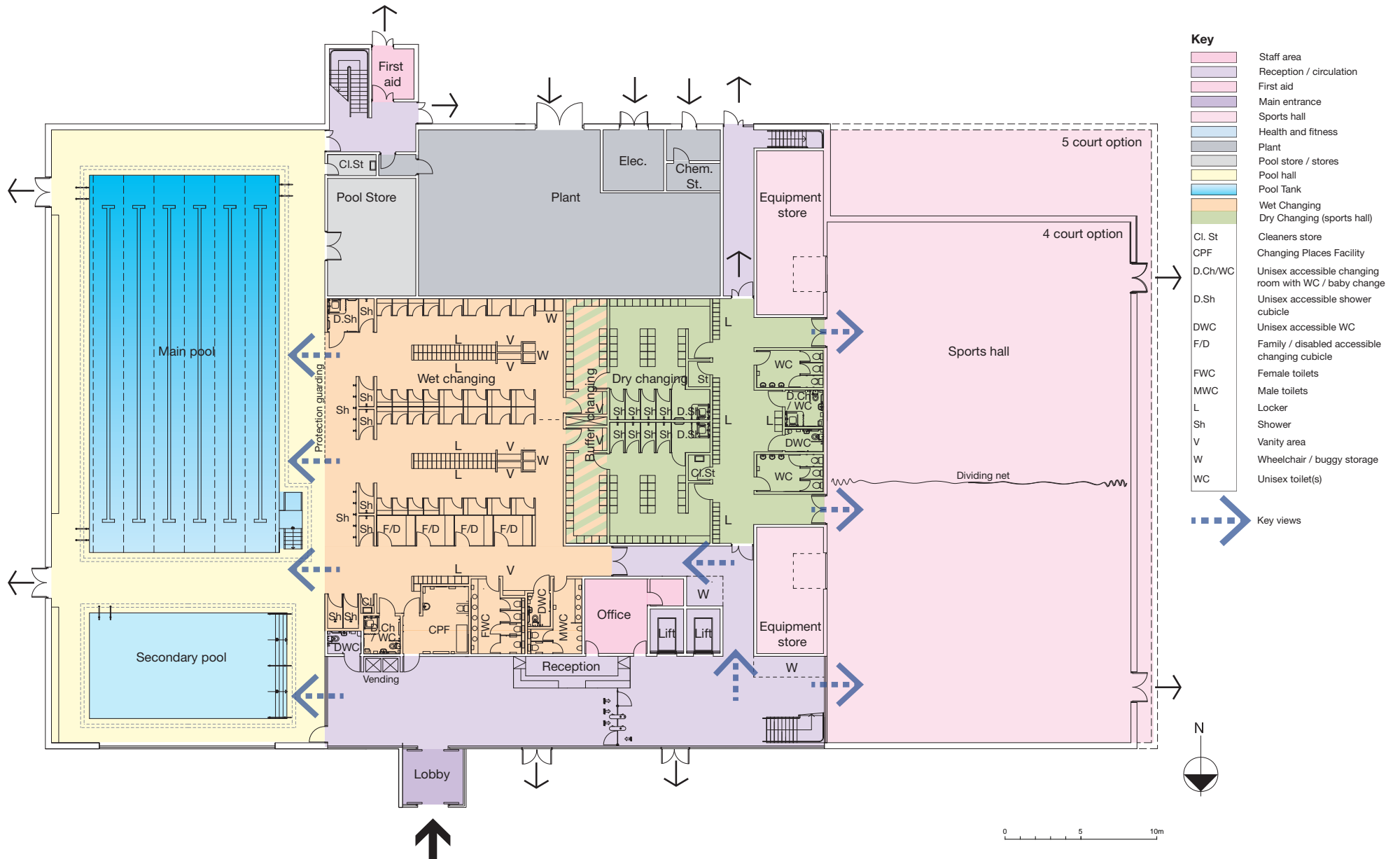
Since the initial publication of this document in July 2013 BREEAM has been revised, all new sports buildings will now be assessed under the 'New Construction Non-Domestic 2014' assessment criteria whereas previously a bespoke assessment was required. All of the options for the affordable sports centre have been designed to achieve a 'very good' rating. Further details of the specification of the mechanical and electrical systems are contained within Appendix 7. A more detailed approach to energy and sustainability is contained within Appendix 8.

Example: Option C 'Affordable' sports centre

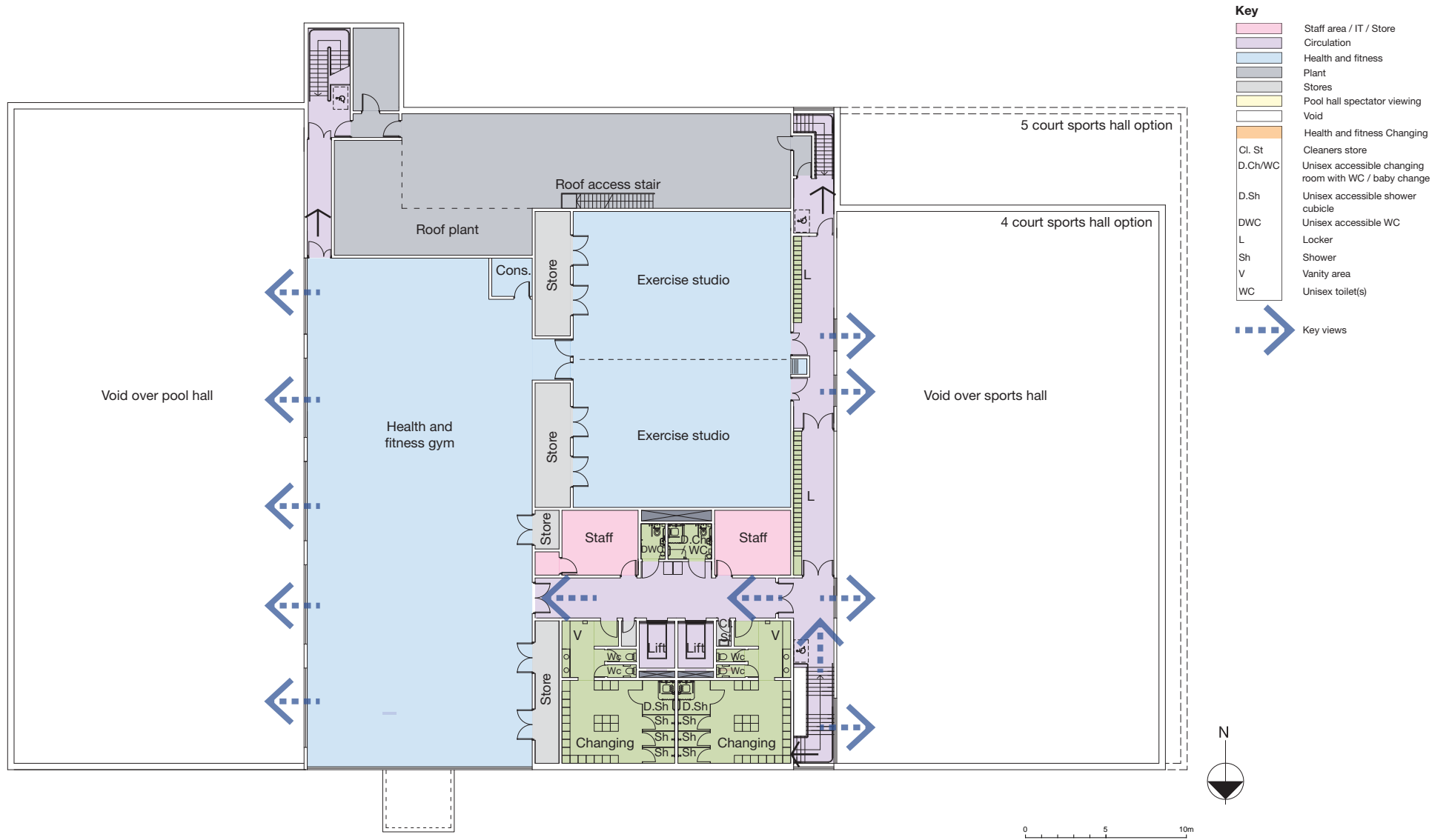
Site plan



Option C Ground floor plan

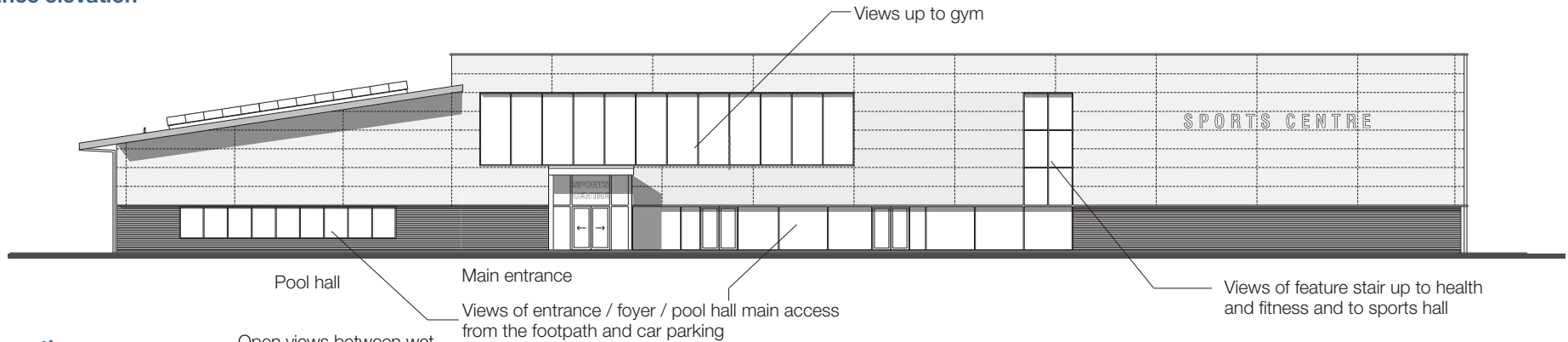


Option C First floor plan

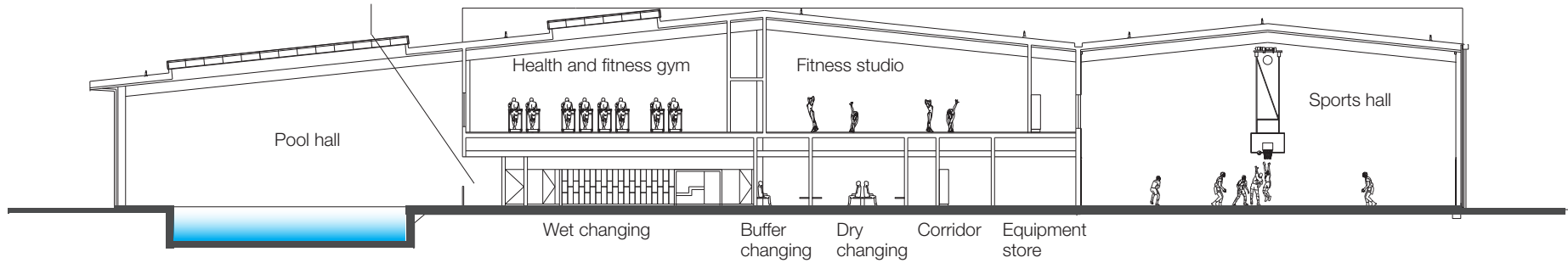


Option C Sections and elevation

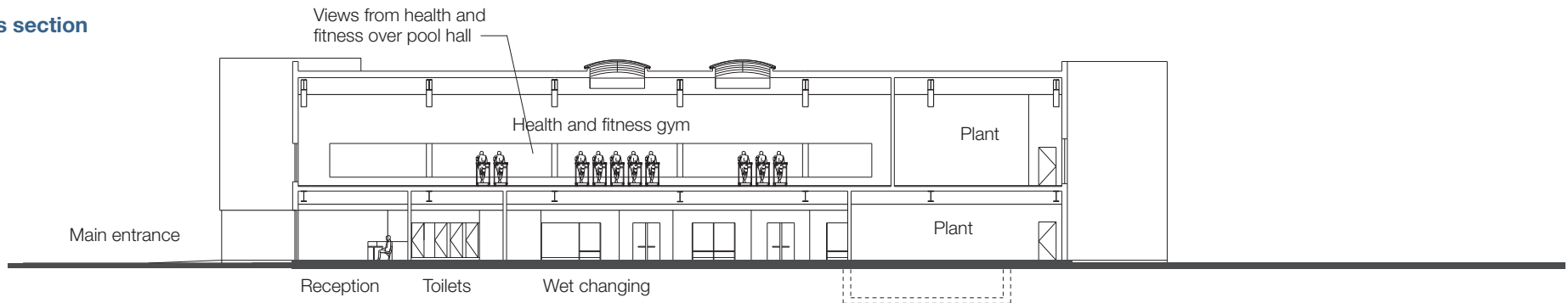
Entrance elevation



Long section



Cross section



Potential Income

Overview

This section identifies the main operational considerations and the implications of selecting the various facility mix options for the Affordable Sports Centres. It reflects the desire to make any new facilities as cost effective as possible and, wherever possible, able to breakeven in revenue terms (excluding 'below the line' costs). In doing so, it is recognised that historically the vast majority of community leisure facilities owned by public sector organisations have required an operational subsidy. In other words, the costs of operating facilities are greater than the income derived.

The Affordable Sports Centre business model projections sit within the top quartile (top 25%) of centre performance data from the industry recognised National Benchmarking Service (NBS). The NBS provides rigorous and robust information on the performance of sport and leisure centres. It allows benchmarking against similar operators, the sharing of best practice, and provides comprehensive evidence of the satisfaction of customers.

Potential management arrangements

For a 25 m community pool developed by the public sector, i.e. a Local Authority possibly in partnership with commercial contractors or as a charitable trust, there are three main routes:-

- Direct Local Authority management, i.e. in-house
- Partnership with a charitable trust; this could be an existing trust, or a new entity, established specifically to manage an authority's facilities
- Entering into a contract with a commercial operator. In reality, there is very little difference between a stand-alone trust and the commercial sector operators, as many now have their own charitable structure. This enables the local authority partner to benefit from National Non-Domestic Rates (NNDR) and VAT savings as they would do through partnerships with a stand-alone Trust. The only difference between the organisational partnerships is the form of the charitable structure, which differs between each operator.

The example budgets shown on the following pages are based on optimum operating practice, underpinned by a series of assumptions.

Evidence suggests that a confluence of these factors can result in a nil subsidy or a net surplus. The four options developed are described in detail in the Introduction chapter.

- Option A: 4-lane x 25 m pool, 4-court sports hall, 50-station fitness suite, 1 studio
- Option B: 6-lane x 25 m pool, 4-court sports hall, 100-station fitness suite, 2 studios
- Option C: 6-lane x 25 m pool, learner pool (13 m x 7 m), 4-court sports hall, 100-station fitness suite, 2 studios
- Option D: 8-lane x 25 m pool, learner pool (17 m x 7 m), 5-court sports hall, 100-station fitness suite, 2 studios

Pricing, user numbers and staff structure assumptions

The operational philosophy, the programming, the pricing, staffing levels, etc. may vary depending on the chosen operational arrangements. In turn, these will influence the levels of income generated and the expenditure incurred and consequently the net profit or subsidy. Evidence suggests that if there is sufficient demand in a given area to provide a critical mass of facilities, the facilities can operate at an operational profit. The key to this is the level of health and fitness provision because this is the biggest income stream, and also the number of, and capacity for, swimming lessons. Key factors for a community leisure centre to generate a financial surplus include:-

- Health and fitness facilities
- An excellent 'Learn to Swim' programme
- Commercial management philosophy
- Realistic pricing structure; imaginative, varied and full programme
- Dynamic marketing and promotion
- Lean staffing structure
- Tight controls on expenditure.

The indicative revenue models have been developed from programming, throughput and pricing data, reflecting existing 25m pools, together with data from the ASA and the leisure industry.

The revenue modelling does not include 'below the line' costs, as these are different for every sports centre project, given that site, location, how the capital cost is funded, etc. varies from project to project.

Capital costs, health and fitness equipment, sinking fund and other below the line costs are excluded, but should be considered as part of the overall development cost, based on the local approach to capital funding of a new facility. Changes in pricing structure and levels will directly impact on the income generation and may depend on the locality, and location of competition.

Swimming lessons have been based on the following assumptions, whilst recognising that some operators may wish to use higher figures:

- Option A (4-lane 25 m main pool)
Zones for 2 classes
- Option B (6-lane 25 m main pool)
Zones for 4 classes and 2 lanes for public swimming
- Option C (6-lane 25 m main pool + secondary pool)
Zones for 4 classes and 2 lanes for public swimming
- Option D (8-lane 25 m main pool + secondary pool)
Zones for 5 classes and 2 lanes for public swimming

Table 1 below shows the income that is expected from the different sports centre options and Table 2 illustrates the expected expenditure of the centres.

See Appendix 4 for typical configurations.

Table 1 - Income £

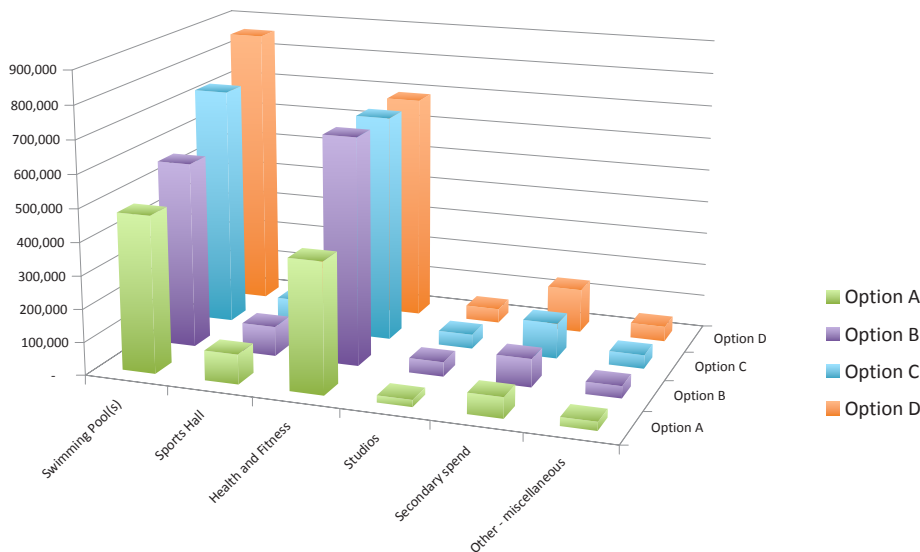


Table 2- Expenditure £

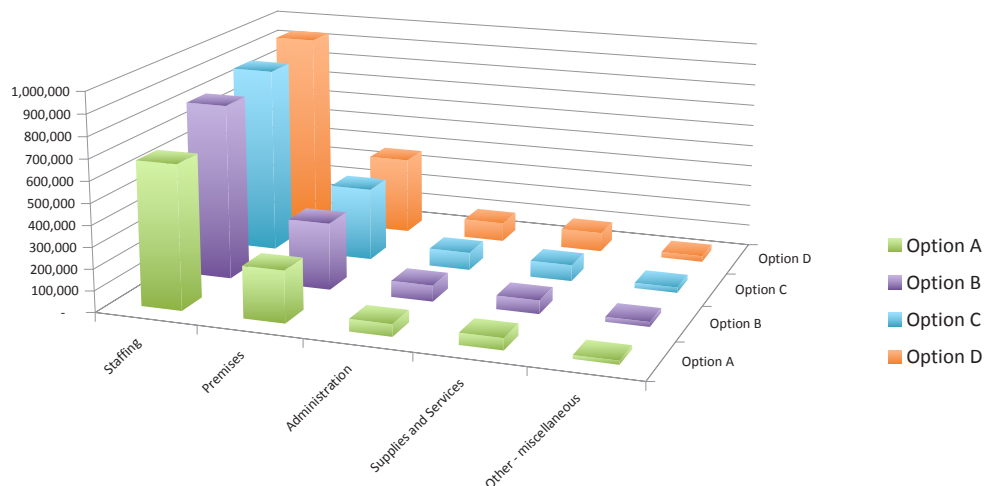


Table 3 below is a generic illustration of potential income and expenditure differences between the various sized facilities. This reflects that a modern operating philosophy can result in better financial performance than the historical norms. For some facilities, this can result in a break even position or the generation of surpluses. The figures are indicative and not specific to any geographical location or catchment area. The challenge for future owners and operators is to manage facilities as cost-effectively as possible; a number of suggestions as to how this can best be achieved are made in this section.

Table 3 - Business plan

| Notes: | | | | |
|--|----------------------------|----------------------------|----------------------------|----------------------------|
| <ul style="list-style-type: none"> Figures are for a mature full year, i.e. year three of a new facility but based on 2014 prices All figures are net of VAT where it applies Assumes a membership package that allows for free swimming and classes Assumes a Non Profit Distributing Organisation (NPDO) operator who will receive 80% mandatory rate relief from NNDR No 'profit' has been included (normally 5% to 10% of turnover if private sector operator) No management fee included Depreciation/capital costs excluded below, but should be considered, as part of the overall cost Income assumptions assume relatively affluent area with some minor competition, hence income projections nearing upper quartile | | | | |
| Budget Summary | | | | |
| | Mature year (3) | Mature year (3) | Mature year (3) | Mature year (3) |
| Income and Expenditure | Option A | Option B | Option C | Option D |
| Income | | | | |
| Swimming Pool(s) | 476,074 | 565,659 | 729,438 | 857,798 |
| Sports Hall | 90,510 | 90,510 | 90,510 | 115,327 |
| Health and Fitness | 394,268 | 689,066 | 689,066 | 689,066 |
| Studios | 20,997 | 43,588 | 43,588 | 43,588 |
| Secondary spend | 62,971 | 85,397 | 108,382 | 134,077 |
| Other - miscellaneous | 26,121 | 36,856 | 41,525 | 45,996 |
| Total income | 1,070,941 | 1,511,076 | 1,702,509 | 1,885,852 |
| Operational Expenditure | | | | |
| Staffing | 670,959 | 821,224 | 878,939 | 935,387 |
| Premises | 242,065 | 314,264 | 343,774 | 364,553 |
| Administration | 56,932 | 75,724 | 83,577 | 89,836 |
| Supplies and Services | 55,063 | 63,105 | 76,514 | 90,711 |
| Other - miscellaneous | 17,703 | 22,655 | 25,193 | 27,255 |
| Total Expenditure | 1,042,722 | 1,296,972 | 1,407,998 | 1,507,741 |
| Operational Profit / (Loss) | £28,219 | £214,104 | £294,512 | £378,111 |
| Throughput | 333,179 | 464,746 | 516,107 | 567,521 |

| Budget Detail | | | | |
|------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| | Mature year (3) | Mature year (3) | Mature year (3) | Mature year (3) |
| Income | Option A | Option B | Option C | Option D |
| Swimming | | | | |
| Casual | 254,031 | 288,243 | 367,251 | 429,005 |
| Lessons | 139,440 | 158,760 | 224,280 | 281,400 |
| Schools | 31,941 | 32,555 | 43,407 | 46,069 |
| Clubs | 47,250 | 47,250 | 47,250 | 56,700 |
| Other | 3,413 | 38,850 | 47,250 | 44,625 |
| Swimming sub-total | 476,074 | 565,659 | 729,438 | 857,798 |
| Sports hall | | | | |
| Courses | 24,926 | 24,926 | 24,926 | 24,926 |
| Clubs | 25,200 | 25,200 | 25,200 | 31,500 |
| Schools | 10,214 | 10,214 | 10,214 | 12,768 |
| Pay and Play (casual) | 30,170 | 30,170 | 30,170 | 46,133 |
| Sports Hall sub-total | 90,510 | 90,510 | 90,510 | 115,327 |
| Health and Fitness | | | | |
| Memberships | 343,343 | 602,966 | 602,966 | 602,966 |
| Pay and Play | 50,925 | 86,100 | 86,100 | 86,100 |
| Fitness sub-total | 394,268 | 689,066 | 689,066 | 689,066 |
| Studios | | | | |
| Classes/courses | 13,779 | 24,819 | 24,819 | 24,819 |
| General Hires (meetings) | 7,219 | 18,769 | 18,769 | 18,769 |
| Studios sub-total | 20,997 | 43,588 | 43,588 | 43,588 |
| Secondary spend | | | | |
| Merchandising | 10,495 | 24,399 | 27,096 | 14,897 |
| Vending | 52,476 | 60,998 | 81,287 | 119,179 |
| Secondary sub-total | 62,971 | 85,397 | 108,382 | 134,077 |
| Miscellaneous income | 26,121 | 36,856 | 41,525 | 45,996 |
| Total income | £1,070,941 | £1,511,076 | £1,702,509 | £1,885,852 |

| Contd...../ | Mature year (3) | Mature year (3) | Mature year (3) | Mature year (3) |
|---|--------------------|--------------------|--------------------|--------------------|
| Operational expenditure | Option A | Option B | Option C | Option D |
| Staffing | | | | |
| Direct Staff costs | 528,150 | 646,800 | 692,475 | 737,100 |
| On costs | 109,505 | 133,991 | 143,126 | 152,082 |
| Other Staff costs | 33,305 | 40,434 | 43,338 | 46,205 |
| Staffing sub-total | 670,959 | 821,224 | 878,939 | 935,387 |
| Premises | | | | |
| Utilities (Gas/Electricity) | 125,748 | 163,254 | 178,584 | 189,378 |
| Water/Sewerage | 12,575 | 16,325 | 17,858 | 18,938 |
| Insurance | 15,719 | 20,407 | 22,323 | 23,672 |
| NDR | 15,719 | 20,407 | 22,323 | 23,672 |
| Building maintenance and repairs | 31,437 | 40,814 | 44,646 | 47,345 |
| Equipment purchases | 9,431 | 12,244 | 13,394 | 14,203 |
| Equipment rental | 3,144 | 4,081 | 4,465 | 4,734 |
| Equipment maintenance and repairs | 3,144 | 4,081 | 4,465 | 4,734 |
| Maintenance contracts | 9,431 | 12,244 | 13,394 | 14,203 |
| Chemicals | 11,003 | 14,285 | 15,626 | 16,571 |
| Trade waste collection | 4,716 | 6,122 | 6,697 | 7,102 |
| Premises sub-total | 242,065 | 314,264 | 343,774 | 364,553 |
| Administration and Marketing | | | | |
| Design, marketing and advertising | 16,064 | 22,666 | 25,538 | 28,288 |
| Postage | 3,144 | 4,081 | 4,465 | 4,734 |
| Printing and stationery | 4,716 | 6,122 | 6,697 | 7,102 |
| Photocopier | 3,144 | 4,081 | 4,465 | 4,734 |
| Security charges | 4,716 | 6,122 | 6,697 | 7,102 |
| Bank charges | 6,287 | 8,163 | 8,929 | 9,469 |
| Professional fees and licences | 6,287 | 8,163 | 8,929 | 9,469 |
| Telephone | 6,287 | 8,163 | 8,929 | 9,469 |
| Sundries / general expenses | 6,287 | 8,163 | 8,929 | 9,469 |
| Admin and Marketing sub-total | 56,932 | 75,724 | 83,577 | 89,836 |
| Supplies and services | | | | |
| Cleaning supplies | 7,859 | 10,203 | 11,162 | 11,836 |
| Items for re-sale | 31,485 | 42,699 | 54,191 | 67,038 |
| Miscellaneous expenses | 15,719 | 10,203 | 11,162 | 11,836 |
| Supplies and Services sub-total | 55,063 | 63,105 | 76,514 | 90,711 |
| Miscellaneous expenditure / contingency | 17,703 | 22,655 | 25,193 | 27,255 |
| Total operating expenditure | 1,042,722 | 1,296,972 | 1,407,998 | 1,507,741 |
| Net operating surplus / (Loss) | £28,219 | £214,104 | £294,512 | £378,111 |

Complementary development

8-lane pool with learner pool

The provision of a community 25 m swimming pool as part of a multi-sports centre will have two main benefits:-

- Resources can be shared across facilities and staffing can be interchangeable to reduce costs.
- Provision of a facility with increased critical mass and potential user appeal, particularly where there are synergies such as between health suite, dance and healthy living facilities. In these cases, 'membership' packages may be sold with the swimming pool acting as a catalyst for:
 - Dedicated sessions such as aqua aerobics
 - Single gender only
 - Parents and toddlers
 - Fun sessions

More specialist activities can also be programmed such as: -

- Water polo
- Canoeing
- Octopush
- Sub aqua.

One-off activities such as small galas can also be catered for, together with private hire sessions for parties. The range of activities will depend on policy decisions, operational considerations and local circumstances. The availability of pool time is a key factor and there may be competing demands. Concurrent use can be made of the pool water area if modern pool technology is employed. It is possible to section off two lanes for fitness swimming and leave the rest available for casual recreational swimming, or section off areas for swimming lessons while lane swimming is also taking place. Other uses are less compatible and some will require privacy and exclusive use (as discussed later as a potential advantage of a secondary pool). Every use of the pool is a potential income stream and some activities are likely to be more lucrative than others. Swimming lessons can be a very positive income generator and advantageous from a financial perspective. However, a pool programme that is dominated with lessons may cause limited access for other user groups. This is one reason why a secondary pool gives benefit and greater flexibility.

Levels of secondary income from vending and merchandising will also depend on the programme and associated levels of use.

The cost-effectiveness of a community swimming pool is inextricably linked to the programme on offer and how well it is marketed. An active approach to programming swimming pools is advocated, one which includes systematic participation pathways so that swimming becomes a lifestyle and lifelong sporting habit.

Partnerships between agencies and organisations should be encouraged and promoted by the 'Big Splash' initiative. An indicative programme of use is included in Appendix 9.

Fitness facilities

Based on the scale of the water space, the revenue modelling demonstrates that the fitness suite ideally needs to be 100 stations (as in Options B, C and D). This should include a combination of cardio and resistance machines. As shown in Options B, C and D, providing 100 stations facilitates greater revenue generation and, depending on the location and local context, may better future proof the facility in terms of demand.

The impact of adding 50 stations increases revenue generation by around £294k per annum, and the additional studio adds a further £21.5k of revenue per annum, compared to Option A. This revenue generation increases the level of operational profit, before any below the line costs are taken into account. Option D has the highest level of operational profit all the options at £378,111. In comparison, Option B generates an operational profit of £214,104, and Option C £294,512. These figures reflect operational profit and loss after all operational costs have been included, but exclude the cost of capital and depreciation, which would be different for each project, depending on how it is funded.

In addition to the fitness suite, a number of multi-purpose studios should be provided. A minimum of 2 studios, each with a capacity of 25 people, would facilitate the delivery of a comprehensive programme of aerobic classes and provision for yoga, pilates, meditation, etc. Provision of an additional studio, which is easily adaptable for future fitness trends, would maximise income generation and also enable provision of space for aerobic classes, spinning, yoga, pilates, etc.

Health and fitness facilities should be open for extended hours to allow 'members' to access facilities at times that suit their patterns of use, e.g. early mornings, evenings and weekends.

Sports hall

The inclusion of a sports hall in all options provides an additional activity and income generating area. Whilst the income assists the overall affordability of the 25 m pool, it is not as critical as that generated by a fitness suite and studios. The capital cost of a sports hall is relatively low in terms of the overall scheme, and it also has low operational costs. Increasing the size of the sports hall does not generate significantly more income, given the participant numbers for which it caters. The size of a sports hall within a sports centre with a 25 m pool scheme will depend on the locality, and existing levels of, and access to, hall provision.

The sports hall and studios should be seen as 'hireable' spaces, rather than specifically for individual sports use. Whilst sports halls should be used predominantly for sports activities, they can be used for other non-sporting events and activities at periods of low demand to ensure that the building is used as much as possible.

Other potential complementary provision

All artificial grass pitches, and particularly a number of small sided pitches are another alternative complementary facility to be considered to contribute to the affordability of a 25 m pool, given their income generating potential.

Vending

The revenue models developed assume that vending is provided in each of the affordable 25 m pool options developed. The scale of operation varies between the options, given the differing levels of throughput and spend per head attributed to each, hence the variance in levels of secondary spend.

The number of vending machines varies in each of the options, depending on the space available. It is assumed the vending machines are also operated through a contract, which includes stocking, servicing and maintenance.

All of the proposed options have vending facilities included in the reception area. A decision should be made early in the design process to establish if there is the demand for a more substantial food

offer, i.e. a 'lite bites' café, a 'grab and go' concept, or a modern coffee bar for example, in which case the front reception area may need to be increased in size to accommodate more seating and kitchen / preparation space.

Whether to provide a café or not will ultimately be a decision that is likely to be based on the size of the centre, its location, whether the user numbers are high enough to warrant investment in a café and whether the centre is located where there is passing trade or in the countryside.

In developing the options for the affordable community 25 m pool, it has become evident through the revenue modelling that an 8 lane pool with a separate learner pool (as in Option D) can provide a higher degree of flexibility in relation to programming. Clearly, Option D, which has a larger fitness suite (100 stations) and 2 studios (25 persons each), generates the most income of all the options with a figure of £360,106 per annum.

The 8 lane pool with separate learner pool is therefore more operationally effective, because it has the potential to generate more income for less expenditure, overall the highest level of throughput at approx. 567,521 per annum. Option D also has the best overall recovery rate of all the options modelled and the highest spend per head at £3.16.

The ability to operate and programme two water spaces, increases the operational flexibility of the facility and reduces the requirement for boom and movable floor facilities in the main pool. Whilst these increase the flexibility of the main pool, their operational requirements need to be reflected in the pool programming to ensure time is available to set up the necessary configurations.

A separate learner pool, or studio pool enables the pool programming to be developed, using both the learner pool and space in the main pool for lessons, which significantly increases the potential for income generation (Options C and D). Importantly, a separate learner / studio pool which can be screened off from the main pool, can benefit activities that need greater privacy. For example, swimming sessions for women only, culturally diverse, or disability groups.

A further advantage of providing two water spaces is that if the main pool is being used for small competition (club level), there is the potential to retain at least some public access in the learner pool, or use this as a warm-down space (albeit small).

Secondary pool and movable floors

The introduction of a 'secondary' supporting pool can significantly enhance the flexibility and cost-effectiveness of a community 25 m pool. It can provide greater programming options leading to higher user numbers and therefore more income, particularly in relation to Learn to Swim programmes, and other aquatic activities such as aqua aerobics. These can be accommodated in the secondary pool without impacting on lane and fitness swimming, club use and schools' use. The addition of a variable depth movable floor in either the main or secondary pool can improve the operational performance still further. The secondary pool envisaged to support the 25 m pool in Options C and D, should be designed for flexibility in operation and be programmed to be 'complementary' to the main pool. It should be actively programmed throughout the opening hours in the same way as the main pool and therefore the depth profile is a very important consideration.

Whilst Learn to Swim courses are likely to remain a mainstay of the programme and income, the secondary pool should be far more than a 'teaching' pool. Sometimes it can provide a direct supporting role such as a warm-up / warm-down facility for competition and, in some cases, it will have an independent purpose such as for swimming lessons whilst training or casual swimming is taking place in the main pool. The variable depth movable floor can accommodate a wide range of aquatic activities including rehabilitation, aqua-natal classes, aqua-aerobics, lifesaving, sub-aqua, canoeing, etc. The variety of programming options is limited only by the imagination of the operator.

Through careful design, sensitive programming, and operational practice, physical separation of the secondary pool can give privacy for some user groups, whilst at other times the two pools can be readily accessed. During general casual swimming sessions this is often more appealing to family groups with more competent members of the family using the main pool and other members using the smaller shallower secondary pool.

Programme and operational management challenges

There are several operational benefits of a 25m pool, but equally a number of operational challenges. The latter includes the operational resources required to set the pool in the correct user layout, staff deployment and training, and the planning of a programme, which optimises the water space to generate maximum income.

Two programmable water spaces, i.e. Options C and D provide the flexibility to retain the learner pool open at all times, even during a competitive event. This is an important benefit in terms of public casual and family swimming.

Capital costs v revenue generation summary

The capital costs of the Options are set out on page 31. Based on these costs, it is clear that all options operate at a profit, excluding below the line costs. Option A generates least operational profit. Option B generates a higher level of operational profit than Option A. Option D generates the highest level of operational profit at £360,106. Given the above, it is evident that there is a greater return on capital in terms of revenue generation from Option D than other options.

Maximising financial performance

It is in the operator's interest to maximise usage whilst minimising operating costs. Considerations include:-

- Opening hours
- Staffing levels
- Safe bathing loads
- The 'programme of use'.

Programming

The operating philosophy will determine the programme. Most Local Authorities will want to encourage a 'balanced programme' in a 25 m pool, alongside usage for squad and club training, which should include:-

- Learn to swim programmes (juniors and adults)
- Casual recreational swimming
- Fitness (lane) swimming
- Club sessions
- Group activities
- Holiday programmes
- Competitive / special events
- Schools

Clearly, there is a link between the programme and income. A 6 or 8 lane pool provides greater opportunity for a diverse programme and more income than a 4 lane pool. For example, structured 'Learn to Swim' programmes that are very lucrative can be accommodated more easily within a bigger pool. The addition of a secondary learner / training pool with a movable floor would give even more potential.

Pricing and income

Pricing is a variable factor in terms of income generation. Community swimming has traditionally been a subsidised activity where the net cost of providing each opportunity to participate is not fully covered by the fee charged. However, there is a trend away from such blanket subsidies and for a more targeted approach to income. Differential pricing, concessions and various packages such as loyalty schemes may be considered. The level of income generated is affected by the programme of use, the demand levels, and the tariff applied. There is a direct link between the programme and income. A 25 m pool with a separate learner pool, 2 studios and 100 station fitness suite, i.e. Option D, generates the most revenue, delivers the best ratio of revenue to capital cost, and is the optimum facility mix in terms of long term provision.

Swimming pool expenditure

Operational costs will depend on management arrangements, operational policies, opening hours, programme of use, etc. Some of the costs are fixed whilst others are variable.

Staff cost

The biggest operational cost is for staff. In the main these are fixed costs but there will be a variable element such as casual lifeguard cover, linked to variations in the pool programme. A stand-alone facility will have proportionally higher staff costs than a multi-sports centre due to the limited ability to share resources.

In typical Local Authority owned facilities, it is not unusual for staffing costs to be equivalent to 50% - 70% of the income generated. This could be reduced by generating higher levels of income, and reducing staffing costs. For example, the use of voluntary staff (subject to appropriate training and Health and Safety considerations) may be an option.

Linking a community 25m pool with other leisure facilities that generate increased revenue and create larger appeal and footfall will result in operational efficiency.

Utilities

The second largest operational cost is utilities. These are mainly fixed because the water and air needs to be treated and heated irrespective of usage levels. However, operational policies will impact on utility costs, for example, by varying bather load, use of showers, backwashing filters, etc.

Utilities in the 8 lane pool options modelled are estimated at £40 / m² per annum based on current operating models. The water volume is the main draw on utility costs as it impacts on gas, electric and water.

Other premises-related expenditure includes:

- Insurance
- Building cleaning and maintenance
- National Non-Domestic Rates (NNDR can be reduced in certain operational models)
- Refuse collection
- Sewerage charges
- Equipment purchases, etc.

Expenditure related to supplies and services will include:

- Pool chemicals
- The purchase of goods for re-sale, etc.

These are variable costs and will depend on the volume of use. Additionally costs will be incurred in the administration and marketing of the community pool. These may include:

- Advertising and promotion (this may be between 1-3% of total income)
- Printing, postage and stationery
- Transport
- Security
- Uniforms
- Licences
- IT
- Training / consultancy
- Health and safety
- Bank charges, etc.

In certain cases it will be necessary to add a 'contribution' to corporate overheads whether these be a Local Authority re-charge for the costs of democracy or a head office re-charge in the case of a commercial contractor.

These are non-operational 'below the line' costs and will vary from operator to operator.

Reducing net operating costs

Based on a new, more commercial and efficient management philosophy, a community 25 m swimming pool can break even or make an operational surplus, as demonstrated by all options.

Ultimately, the financial impact of each facility will be dependent on a combination of the factors raised above. A swimming pool with a lean operation, a packed programme, the ability to minimise taxation costs (NNDR and VAT), and higher than average prices will do better financially than a facility that has high staffing levels, high overheads, a restricted programme, subsidised prices, etc. That is not to say that the former provides better quality services or contributes more to the community. This depends on the objectives set by the project sponsor and its stakeholder.

The ultimate financial performance of community 25 m pools

The main determinants of income and expenditure have been described and clearly the balance between these two factors will result in the 'bottom line'. They will be affected by a number of issues, and these need to be considered in detail when preparing a Business Case for a new facility. The location, the competition, the facility mix (size and scope of the pool and complementary facilities), the catchment area demographics, pricing policy, programming etc will all impact on income. It is harder to predict future income levels with any certainty, but much easier to forecast expenditure due to many of the costs being largely fixed. Staffing levels and remuneration should be considered carefully and kept to a minimum subject to having the requisite levels to maintain a safe and user-friendly experience.

The design of the pool and the efficiency of the plant can also impact on running costs, e.g. the use of CHP units. NNDR costs can be reduced by up to 85% depending on the status of the operator. Similarly, further savings in VAT can be generated subject to the operating model.

Due consideration of the factors referred to above can make the difference between operating at a cost or a surplus.

Life cycle maintenance costs

These are crucial to the ongoing operational effectiveness of a community 25 m pool. Sufficient financial resources must be put aside to ensure the regular redecoration and refurbishment of the building fabric and finishes and the replacement of plant and equipment. The appearance, ambience and environmental comfort of a facility are all critical in ensuring repeat business over a sustained period of time.

Occupancy and maintenance costs

Annual maintenance and occupancy costs for a particular building design will be affected by a variety of factors, which should be taken into account when using this estimate.

- Size, shape and layout
- Design and specification (sustainable technologies included)
- Intensity of use
- Location. Approximate estimates for the average annual cost of maintaining and occupying the building are used in the indicative budgets on page 24.

Key factors to consider in the business plan include:-

- Location
- Competition from other facilities
- Size and scope
- Complementary facilities
- Catchment area demographics
- Programme
- Pricing.

Findings

A larger pool has the potential to operate more cost-effectively than a smaller pool because it can generate additional income which is disproportionate to the additional running costs incurred. This financial improvement could be used to offset the higher capital costs. Options B and C provide more aquatic and dryside activities for more people and therefore can have a greater positive impact for the community.

Most striking is the even better financial performance that can be achieved with the inclusion of a secondary pool and an additional studio and larger fitness suite as in Options C and D. These can be programmed to complement the activities within the 8 lane main pool and offer a wider programme of activities.

Although there are many variables that should be considered, larger pools have the potential to operate more cost-effectively in terms of both programming and income generation. Despite the increased in operational costs with the greater size there can be a net benefit for more people and the wider community.

Every use of the pool is a potential income stream.

Capital Costs

Overview

An overview of the capital costs for the options is given in the following table based on benchmark data and the relevant area schedule. It includes the following main assumptions:-

- Building costs at 4th Quarter 2014
- VAT excluded
- Statutory fees excluded
- Land acquisition costs excluded
- A green field site with no abnormal ground conditions
- The works are competitively tendered via an industry standard procurement route
- Drainage beyond the building footprint is site dependent and is included within 'External works allowance'
- External works are included as a notional allowance
- Incoming services assessed as a notional value, assuming availability from existing infrastructure
- Preliminaries are based on an unrestricted site with a construction period of 12 to 13 months
- Sports hall equipment is included
- Loose furniture and fittings are excluded.

| Elemental Cost Breakdown | OPTION A | | OPTION B | | OPTION C | | OPTION D | |
|---|---|--------------------|--|--------------------|--|--------------------|--|--------------------|
| | 4-lane Swimming Pool, 4-court sports hall, small health and fitness | | 6-lane Swimming Pool, 4-court sports hall, medium health and fitness | | 6-lane Swimming Pool, plus Learner Pool and 4-court sports hall, medium health and fitness | | 8-lane Swimming Pool, plus Learner Pool and 5-court sports hall, medium health and fitness | |
| Gross Internal Floor Area (GIFA) | 2,879m ² | | 3,553m ² | | 3,906m ² | | 4,509m ² | |
| | Total Cost of Element £ | £ / m ² | Total Cost of Element £ | £ / m ² | Total Cost of Element £ | £ / m ² | Total Cost of Element £ | £ / m ² |
| Substructure | 504,000 | 175 | 549,000 | 155 | 629,000 | 161 | 708,000 | 157 |
| Superstructure | | | | | | | | |
| Frame | 394,000 | 137 | 498,000 | 140 | 543,000 | 139 | 621,000 | 138 |
| Upper floors | 61,000 | 21 | 104,000 | 29 | 105,000 | 27 | 126,000 | 28 |
| Roof | 470,000 | 163 | 530,000 | 149 | 575,000 | 147 | 636,000 | 141 |
| Stairs | 40,000 | 14 | 52,000 | 15 | 52,000 | 13 | 52,000 | 12 |
| External walls and windows | 546,000 | 190 | 600,000 | 169 | 629,000 | 161 | 660,000 | 146 |
| External doors | 56,000 | 19 | 56,000 | 16 | 56,000 | 14 | 59,000 | 13 |
| Internal walls and doors | 326,000 | 113 | 372,000 | 105 | 456,000 | 117 | 492,000 | 109 |
| Superstructure total | 1,893,000 | 658 | 2,212,000 | 623 | 2,416,000 | 619 | 2,646,000 | 587 |
| Internal finishes | | | | | | | | |
| Wall finishes | 153,000 | 53 | 169,000 | 48 | 176,000 | 45 | 188,000 | 42 |
| Floor finishes | 249,000 | 86 | 304,000 | 86 | 335,000 | 86 | 374,000 | 83 |
| Ceiling finishes | 72,000 | 25 | 94,000 | 26 | 95,000 | 24 | 102,000 | 23 |
| Internal finishes total | 474,000 | 165 | 567,000 | 160 | 606,000 | 155 | 664,000 | 147 |
| Fittings | 286,000 | 99 | 325,000 | 91 | 362,000 | 93 | 411,000 | 91 |
| Services | | | | | | | | |
| Sanitary appliances | 64,000 | 22 | 69,000 | 19 | 70,000 | 18 | 72,000 | 16 |
| Disposal installations | inc. below | | inc. below | | inc. below | | inc. below | |
| Mechanical and electrical installation | 1,340,000 | 465 | 1,677,000 | 472 | 1,854,000 | 475 | 2,102,000 | 466 |
| Specialist installations | 300,000 | 104 | 330,000 | 93 | 444,000 | 114 | 480,000 | 106 |
| Builders work in connection | 82,000 | 28 | 101,000 | 28 | 115,000 | 29 | 130,000 | 29 |
| Services total | 1,786,000 | 620 | 2,177,000 | 613 | 2,483,000 | 636 | 2,784,000 | 617 |
| Building Subtotal | £4,943,000 | £1,717 | £5,830,000 | £1,641 | £6,496,000 | £1,663 | £7,213,000 | £1,600 |
| Preliminaries | 500,000 | 174 | 611,000 | 172 | 624,000 | 160 | 675,000 | 150 |
| BASE CONSTRUCTION COST | £5,443,000 | £1,891 | £6,441,000 | £1,813 | £7,120,000 | £1,823 | £7,888,000 | £1,749 |
| Contingencies @ 5% | 272,000 | 94 | 322,000 | 91 | 356,000 | 91 | 395,000 | 88 |
| Professional fees @ 10% | 544,000 | 189 | 644,000 | 181 | 712,000 | 182 | 789,000 | 175 |
| External works allowance | 250,000 | 87 | 275,000 | 77 | 275,000 | 70 | 300,000 | 67 |
| Incoming services / stats prov. allowance | 100,000 | 35 | 100,000 | 28 | 100,000 | 26 | 100,000 | 22 |
| Typical sports hall equipment costs | 43,000 | 15 | 43,000 | 12 | 43,000 | 11 | 54,000 | 12 |
| Additional costs total | 1,209,000 | 420 | 1,384,000 | 390 | 1,486,000 | 380 | 1,633,000 | 364 |
| OVERALL ESTIMATED PROJECT COST | £6,652,000 | £2,311 | £7,825,000 | £2,202 | £8,606,000 | £2,203 | £9,526,000 | £2,113 |

Additional feature costs

Extra base construction all in indicative costs for optional features:-

| Option | Description | Estimated costs |
|--------|--|-----------------|
| A | Addition of movable floor to secondary pool (17 m x 7 m) | £255,000 |
| B | Main pool cover 8-lane (25 m x 17 m) | £25,000 |
| C | Pool cover for secondary pool (17 m x 7 m) | £10,000 |

Procurement and Delivery

Introduction

This section identifies high level procurement options for this scale of sports centre building. It is intended to be generic and should be read in conjunction with the [Sport England Procurement Toolkit](#) that provides significantly more detail, including template contract documentation and guidance. This, nor the toolkit, will replace the need for quality specialist advice, though it may enable clearer, more focused briefs to be developed to ensure that consultants are deployed as effectively as possible in the procurement process.

Influencing factors on procurement will, amongst others, include attitude to risk, affordability, timescale, control over design and market interest. It is assumed that an affordable sports centre with a community 25 m pool will typically be developed by the public sector, i.e. a Local Authority is likely to be the client (possibly in partnership with commercial contractors for example), albeit the principals and best practice processes can be adopted by other employers / clients.

Procurement generally

There are a number of procurement roles to be fulfilled in delivering a successful project. The level of client in-house resource and expertise may be limited in some instances, so consideration will need to be given to additional external support requirements, including some or all of the following:

- Project management (whether internal or procured externally) and reporting structures
- Financial advice
- Legal advice
- Construction
- Technical advice (professional team: architect / construction project manager / cost consultant / other technical disciplines)
- Leisure / Operator advice.

This overview comments only on the construction and related consultant technical team appointments together with the timing of the potential input of a leisure operator.

Contractor and Consultant Frameworks

There are a number of construction frameworks used across the United Kingdom. An advantage of using these is that a pre-qualification process will have already been undertaken in accordance with the Public Procurement Regulations. In the case of contractors the framework will have a selected list of main contractors from which a number may be invited to tender the works. The use of frameworks should be considered in the project Procurement Options report.

Similarly for consultant team appointments, Sport England encourages public sector clients to review available framework agreements that have the ability to contain sports and leisure experience. This can reduce delivery timescales and potentially reduce costs.

The importance with any appointment is to ensure that the consultants and contractors on these frameworks have the requisite sports and leisure skills, expertise and experience.

Sport England has been leading on the development of a standard suite of documents for leisure operator procurement as a 'toolkit' of documents. Please refer to the 'Procurement Toolkit' on the Sport England website.

Construction

The procurement route selection is critical to the success of any construction project. Every project has unique requirements and therefore all viable procurement options need to be appraised at the beginning of the process. A Procurement Options report should be prepared with all key project criteria evaluated to inform the selected approach.

There are often two key project elements that need to be procured to deliver a new leisure centre. The first is the delivery of a new capital build project and the second is procuring an operator to manage and operate the new centre. Procurement of these two elements can be considered separately or as a combined / joint approach.

Separate approach

- Using this approach, the capital build contract and the leisure operation contracts are procured separately. The design process is separate from the operator tender. However, the operator contract can be procured in parallel with the capital works to facilitate operator input into design.
- Operation contracts are generally procured on a similar basis for each project and the variations that exist in the drafting of agreements, do not affect the procurement process. A typical operator (management contract) will last for 7-10 years but could be tendered for up to 25 years
- A template Leisure Operating Contract management agreement is contained within the Sport England Procurement Toolkit

Traditional

In the traditional design and build construction project, the client enters into a contract with a design professional (typically an architect) to design the facility. Other consultants may be employed as 'sub-consultants' to the architect or direct by the client, for example engineers to assist in the development of the design stages. The client will typically also appoint a cost consultant and project manager, together with other specialist input as required. When the design is complete and approved by the client, tender documentation is prepared by the professional team and tenders are solicited from building contractors. The client then enters into a separate contract with a building contractor for a fixed price to construct the facility. The client retains their professional team.

Single stage Design and Build

The single stage design and build approach has formed a significant part of the market for delivery of sports / leisure centres over the past decade. Whilst Contractor appetite for single stage D&B has waned in recent times, it may still be considered in particular instances. Typically, the design is developed by the successfully procured Design Team to RIBA Stage 3 (Developed Design), at which point the works are tendered to the construction market. This is sometimes referred to as a 'Develop and Construct' procurement route due to the more advanced stage of the design prior to tendering.

Two stage Design and Build

For larger sports centres, a two stage approach tends to offer a greater appeal to contractors, given the potential costs of tendering associated with a single stage approach. Whilst there are many variations, typically the process involves:

- The selection of building contractors to bid based upon their preliminary costs, overhead and profit (based upon RIBA Stage 2/3), together with qualitative requirements. Best value bids are taken to a second stage where they are asked to price for the construction element based upon a further developed technical design (Stage 3/4) which has their input on build-ability with supply chain participation. The latter option provides more cost certainty and is normally quicker to procure
- Following the appointment of the building contractor, certain members of the professional team may be novated across to the contractor or the contractor may employ their own design team including architects and engineers. In any event, the design is transferred to the contractor from the client. The client may retain members of the professional team to become their Employer's Agent or representatives to evaluate, negotiate and value the building contractor's proposals during the design development and construction phases.

Under this type of procurement, a separate exercise is usually still required to procure a leisure operator, although it does offer flexibility in relation to operation being delivered by an existing delivery vehicle. An integrated solution with an operator to inform the design isn't necessarily provided, so there may still be the interface risks with the leisure operator.

Joint strategy

- There is increasing evidence that a combined contractor and leisure operator procurement can deliver successful sports centres. This route is used to procure both the building and its subsequent management and operation.
- It is referred to as a 'DBOM' (Design, Build, Operate and Maintain). This is based on a Design and Build procurement route, where a contract is entered into with a consortium that will take the lead and risk in the design, construction and the operation of the new facility.

- This typically includes a contractor and operator and is often referred to as a 'one stop shop'. The client issues an output specification covering the 'Employer's Requirements' standards of construction, the facility requirements (pool, gym, etc.) and service requirements (e.g. opening hours, programming, cleaning, quality accreditation, etc.)
- A consortium would then bid for the contract for a period of 15+ years and deliver an optimum solution (in terms of design, construction and operation), balancing capital costs and revenue costs. One of the advantages for a client is that with a DBOM contract there is a single point of responsibility and potential disputes between the building contractor and the leisure operator are avoided.
- A template agreement for a Design, Build, Operate, and Maintain (DBOM) Contract is contained within the Sport England Procurement Toolkit.
- Clients have a number of potential routes for contracts of this nature, each with its own procedures and timescales. The client will need to consider the appropriate route based on the complexity of the contract terms. It should also strongly consider soft market testing on the scope of the opportunity and key issues with likely bidders to inform the subsequent procurement process.

Consultant procurement

As stated under the Frameworks section above, Sport England encourages public sector clients to review established Frameworks.

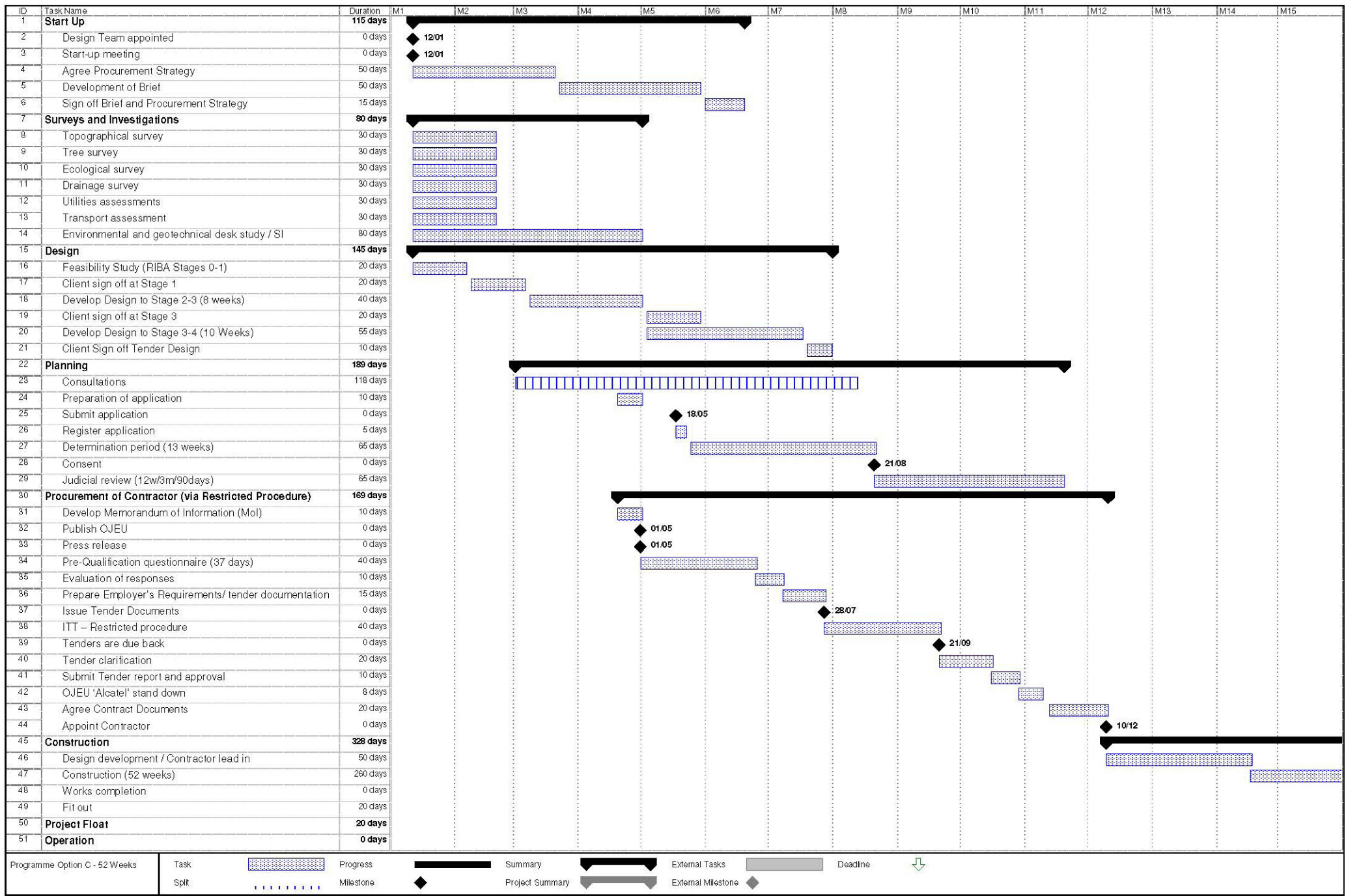
If a client is not satisfied that a framework has consultants with the required experience on it then, subject to thresholds, consideration will need to be given to running a bespoke OJEU tender process, probably via a Restricted Procedure.

Dependent upon contractor procurement, it is recommended that the client retains or employs separately, some client side expertise in relation to specialist installations. For example, on a design and build route, the client will most likely retain the cost consultant and or project manager. In addition, a pool specialist may be retained to offer advice as the design develops and also to perhaps undertake some key stage inspections as the works proceed on site. These costs should be factored in to the overall business case.

Construction programme

An outline indicative programme has been prepared to demonstrate the likely timescales for delivery of the 6 lane pool project (Option C) contained in this document. This shows that the project could be completed within 24 to 30 months of the decision to progress the scheme using a Design and Build' procurement route, although the introduction of other facilities may increase the overall programme. The method of procurement will also have an impact on the overall programme and the two will need to be carefully balanced. As this is an outline indicative programme, it will need to be developed by the appointed project manager to further break down each stage of the project and to provide a more detailed analysis of the design development, approvals and key stage sign-off, planning and consultation strategy. The involvement of a contractor at an early stage, will also enable input on the programme for the construction phase.

A new Sports Centre with 8 lane community 25 m swimming pool can be opened within c.2 years, dependent upon option and overall facility mix.





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User Guide

Before using this guidance for any specific projects all users should refer to the User Guide to understand when and how to use the guidance as well as understanding the limitations of use.

Click here for '**User Guide**'

Click here for '**Design and Cost Guidance**'

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