



**Affordable Sports Centres
with Community 50 m Pool Options**

Contains essential reference material for the efficient delivery of affordable and financially sustainable swimming pools.

Indicative base construction rates to Sport England standards from £1,938 / m²

Base construction costs for 'Affordable' sports centres (2Q2014):

50 m swimming pool

+ sports hall

+ health and fitness gym

+ studios

£11.98m - £12.60m

Typical procurement period 2½ years from inception to operation

Potential community use income from £2.2m - £2.8m / year¹

Potential throughput over 830,000 users / year

¹ Subject to pricing, programme, site and operating assumptions

Executive Summary

This review has been produced jointly by Sport England (SE) and the Amateur Swimming Association (ASA) to help project teams develop a 50 m swimming pool that meets a full range of community needs, water polo and 50 m training.

It supplements and extends the reference information contained in the *Affordable Community Swimming Pools* (ACSP) and *Affordable Sports Centres* (ASC) documents which focused on 25 m swimming pool requirements. It provides additional reference tools to help achieve affordable, efficient and sustainable 50 m community pool facilities where permanent spectator facilities are not required.

The core aspirations and approach remain as in the previous affordable reviews and include:

- A number of indicative designs with supporting capital cost and operational models
- Updated and extended design, construction and operational information
- The benefits of movable floors and boom technology
- The impact of including other facilities such as exercise, fitness areas and sports halls in the facility mix
- Efficient, effective and economical design that complies with current standards and creates buildings with customer appeal
- The implication of the recent changes to the Building Regulations aimed at reducing carbon emissions (Part L2A : 2013).

The team who developed this study includes key stakeholders and a range of experts and designers from the construction industry.

The operational modelling suggests that a 'pool only' option is in most circumstances unlikely to be viable as a stand-alone facility. However this may be an option at some sites, for example on University campuses, where the additional pool facilities may complement existing dry sports facilities.

For most projects though, it is more likely that the pool facilities will need to be combined with other dry sports facilities to form a financially viable and sustainable 'Affordable' Sports Centre.

Therefore, the review includes options for 50 m pools combined with other dry sports and pool facilities. The indicative designs provide facilities that are commonly needed and will generate additional income. The particular size and relevance of these additional facilities will depend on local circumstances. However, a health and fitness facility of approximately 100 stations is likely to be required to achieve a balance between income and operating costs.

The key driver behind a 50 m community pool project, should be to satisfy the proven demand for water area in a particular locality. This might be to meet local requirements or part of a rationalisation strategy for a number of existing facilities to be consolidated on one site.

The requirement for training facilities (and any potential competitive use) is more strategic and this should be considered in consultation with the ASA Facilities Team.

The appendices contain further supporting information including an outline of the affordable approach to fabric performance, energy efficiency and building services in line with (Part L2A : 2013) Building Regulations. Additional accompanying guidance provides options to improve on these standards and further reduce the environmental impact of large sports centres.

The review shows that:

- ***Multi-sports centres with community 50 m swimming pools have the potential to operate cost-effectively and generate an operating surplus***
- ***A secondary pool, a third studio and a larger fitness studio can result in the generation of larger surpluses***
- ***The largest sports centre (Option 3) provides greatest sporting benefit for the community and the best financial impact***
- ***The financial improvement could be used to off-set the higher capital costs.***

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1. Detailed Accommodation List
2. Schedule of Areas
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6. Structural Design and Drainage
7. Building Services
8. Energy and Sustainability
9. Programme of use for 8 lane 50 m swimming pool and 20 m x 10 m secondary pool

Introduction

Purpose of document

As with the previous ACSP and ASC guidance, the purpose of this review is to provide a set of reference documents to support the decision making process for new 50 m community swimming pool projects. It has a particular emphasis on affordability and future financial sustainability.

The review is based on a number of indicative designs that are tightly planned, functionally efficient and accommodated within an economical building structure that can be quickly constructed.

The designs are fully compliant with Sport England guidance, statutory requirements and current industry standards. The detailed requirements have been carefully reviewed from first principles to ensure that the associated cost and operational models are up to date and realistic. The indicative designs and associated cost and operational models provide a reference point for the development of 'Affordable' projects that can be tailored to the needs and requirements of a particular site.

Options are provided for 8 lane, 50 m pools, combined with supplementary facilities. These build on the general concept promoted in the ACSP and ASC guidance and can be adapted to individual site circumstances.

The design options are supported by cost, specification and procurement information to demonstrate the viability of the proposals. The concepts are intended to be a reference tool and are not meant to replace the normal services of a suitably experienced architect and specialist consultants who will be required to develop the design and business proposals.

The review addresses the requirements of Sport England (SE), the Amateur Swimming Association (ASA), Building Regulations and other statutory bodies. Consultation with Leisure Operators has ensured that commercial matters have been addressed to provide a financially sustainable development.

The delivery of sports centres with 50 m community pools supports the ASA's strategic vision for a network of accessible and affordable facilities which have no barriers to participation. They provide an affordable base for a network of 50 m training and competition facilities to allow the further development of local talent to the highest level.

Scope of review

The table below illustrates the range of accommodation and facility mixes for the three options. They include main pools (with and without movable floors and booms), secondary pools, health and fitness gyms, dance studios and 5 court sports halls.

See the Building Design section on page 6 for a more detailed description of the individual elements within the options.

Summary facility mix for the 3 options

See appendices for a more detailed area schedule

Options	1	2	3
Swimming pool(s)			
Main pool (8 lanes)	●	●	●
Movable floor / boom (half main pool)	●	-	-
Secondary pool (20 x 10 m)	-	●	●
Wet changing	●	●	●
Buffer / school / group changing	●	●	●
Changing places/ full accessible provision	●	●	●
Entrance	●	●	●
Office	●	●	●
Sports Hall			
5 court hall (badminton)	●	●	●
Equipment storage	●	●	●
Dry changing	●	●	●
Health + fitness			
Gym stations ²	100	100	150
Studios (25 person)	2	2	3
Changing with accessible provision	●	●	●
Café	●	●	●

² minimum 4.5m² per station

Strategic Planning

The development of a 50 m 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 50 m pool, in the right place, with the right programme has the potential to generate a positive return. However, the same pool 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. It is therefore essential that operators and stakeholders fully understand the swimming requirements of their local community and are able to articulate them.

Sound decisions on the length of the pool(s) or the number of lanes, whether a movable floor or boom is required, 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.

Sport England and the ASA have developed new guidance *'Developing the Right Swimming Pool'*, 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).

- 1 **GETTING STARTED**
- 2 **SUPPLY AND DEMAND**
- 3 **STRATEGIC CONSIDERATIONS**
- 4 **TYPE, LEVEL AND AMOUNT OF ACTIVITY**
- 5 **DEVELOPING AND REVIEWING THE OPTIONS**
- 6 **DEVELOPING THE STATEMENT OF REQUIREMENTS**
- 7 **THE BUSINESS CASE AND VALUE FOR MONEY APPRAISAL**
- 8 **THE DECISION**

'Developing the Right Swimming Pool' ***The guidance will help:***

- Operators and stakeholders to understand and articulate the swimming 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). 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 provision is delivered that meets local needs and sustainable in the long term, through clear, logical business and operational planning.

Building Design

Design Guidance

Reference has been made to other relevant current Sport England and ASA guidance as follows:

Sport England guidance:

- *Swimming Pools Design Guidance Note*
 - Appendix 1: Pool types and technical design issues
 - Appendix 2: Servicing the building
 - Appendix 3: Construction and specification considerations
 - Appendix 5: Further information
- *Accessible Sports Facilities Design Guidance Note*
- *Affordable Sports Halls*
- *Affordable Community Swimming Pools*
- *Affordable Sports Centres*.

ASA Guidance:

- *Pool Design Requirements 50 m by 8 lanes*
- *Capital Cost Details 50 m Pools*
- *Deck Level Swimming Pools and Raised Ends*
- *Minimum Recommended Swimming Pool Spectator Seating Capacities*
- *What is a swimming pool?*
- *Reasons for pool water depth and traditional profiles*.

The above documents are directly relevant to this review. However, there are a range of specific design issues requiring a fresh approach for a 50 m community pool scenario, compared to a 50 m competition pool, which have been agreed with the ASA. These include:

- Lane widths
- Pool depths
- Pool surrounds
- Swimmer and spectator seating
- Pool configuration options
- First aid rooms.

The indicative designs included in this suite of documents are based on the above guidance.

Location

A new facility of this scale is likely to serve a wide demographic area. Careful consideration should be given to points of access to ensure a welcoming, customer friendly and accessibility approach to the building. Careful integration with the site will also ensure level accessibility and minimise any changes required to site topography.

External facilities

As with the Sport England 25 m *Affordable Community Swimming Pools* (ACSP), an appropriate scale of parking needs to be provided to suit the particular location and local planning requirements. However, the larger pool with an increased potential for use will have a greater requirement for coach drop-off points, parking for minibuses for visiting clubs and schools. There will also be more frequent deliveries of pool chemicals due to increased pool water treatment demands, with safe vehicular access particularly important.

The internal layouts of the three indicative building designs have been arranged so that the main entrance elevation provides a 'shop window' to the key facilities within. The extensive glazing to the fitness gym and the end of the pool hall is north facing thereby minimising heat gain and potential glare to the water surface. For sites where this north orientation is not feasible, additional measures such as brise soleil, overhanging eaves, blinds, solar glass etc. may be required.








Design approach

The indicative design options follow a similar approach to that outlined in the previous ASC guidance for the creation of simple, compact, and functional buildings. The ASC concept has been adapted to suit the larger 50 m pool, changing facilities, plant spaces and larger health and fitness options.

Occasional pool spectator viewing is from the poolside and there is controlled access directly from the foyer. The wet and dry changing areas (with shared buffer changing) are located between the pool hall and sports hall volumes for flexibility. There are a range of approaches to the pool tank design with continuous depth and varying water depth options and the pool plant has been located adjacent to the pool(s). Where plant space is required across more than one floor level, a stacked volumetric arrangement is provided.

Options for combining the Sports Centre elements

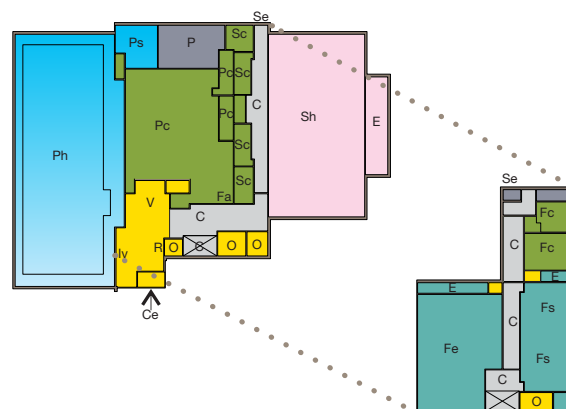
Key

	Sports Hall (SH)
	Changing (+CH)
	Health and Fitness (+HF)
	Swimming Pool
	Circulation / lifts
	Reception zone / staff
	Plant

C	Circulation
Ce	Community Entrance
E	Equipment Store
Fa	First aid / accessible change
Fc	Fitness changing and toilets
Fe	Fitness equipment gym
Fs	Fitness studio
Iv	Informal viewing
O	Office / staff areas / meeting room
P	Plant
Pc	Pool change zone
Ph	Pool Hall
Ps	Pool store zone
R	Reception
S	Storage
Sc	Sports hall changing and toilets
Se	Secondary exit / fire escape
Sh	Sports hall
V	café / vending

Option 1

- 50 m x 17 m 8 lane pool
- 1.8 m deep water tank, with submersible boom and 23.5 m long movable floor
- 2 multi-purpose studios
- 100 station fitness suite
- 5 court sports hall
- café



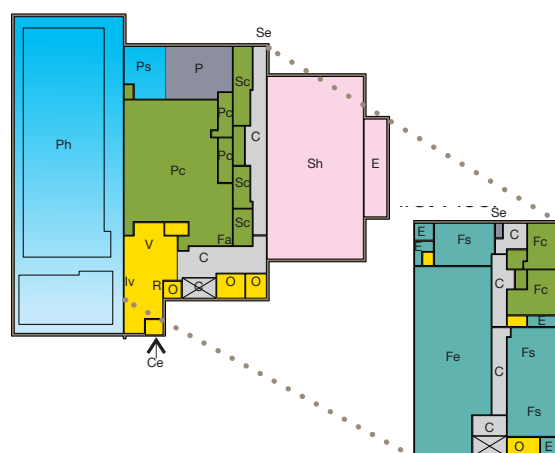
Option 2

- 50 m x 17 m 8 lane pool
- Tank profile 1.8 m for 30 m length rising to 1.0 m
- 20 x 10 m secondary pool
- 2 multi-purpose studios
- 100 station fitness suite
- 5 court sports hall
- café



Option 3

- 50 m x 17 m 8 lane pool
- Tank profile 1.8 m for 30 m length rising to 1.0 m
- 20m x 10 m secondary pool
- 3 multi-purpose studios
- 150-station fitness suite
- 5-court sports hall
- café



General provision

The core facilities in the indicative designs are discussed below.

Entrance and reception

The entrance and reception are designed to give users some viewing of the internal sports areas, especially the pool hall. The reception is also the central hub for the operation of the centre, with clear views of internal and external circulation routes.

The foyer includes space for automatic ticket machines, a membership 'welcome' area, retail / displays, automatic entrance barriers and a seating area with views over the pool. A cafe is also provided which should be sized to reflect local market conditions. These areas are considered to be a minimum to accommodate the peak visitor numbers expected from the programme of use.

Administration and staff areas

Accommodation is provided for staff, officials and visiting trainers / coaches.

Pool hall

The 50 m 8 lane pool size is intended to meet the needs of the entire local community and designed to accommodate a range of activities, e.g.:

- Learn to swim, children and adults
- Teaching shallow dives / race starts
- Use by disabled people
- Swimming for fun / enjoyment / floating equipment
- Fitness swimming
- Aqua jog / Aquafit / Exercise in water / Aquacise
- Water polo and mini water polo
- Octopush
- Canoe practice
- Life saving training
- Sub aqua training.

In addition, with a greater length of deep water the 50 m pool will be particularly suitable for:

- Swimming: 50 m training
- Water polo: county and sub-regional development centre training
- Synchronised swimming: low level training.

It is not within the scope of this document to explore diving facilities. Therefore, diving provision has not been included in the indicative designs. However, the proposed 1.8 m depth would meet the minimum depth requirements for shallow competitive diving and racing starts.

Pool tank dimensions

It is judged that 2.0 m wide lanes are adequate for 50 m community pools as would apply to a training pool. The indicative designs have a width of 17 m for an 8 lane pool allowing for 8 no. 2.0 m lanes plus 2 no. 0.5 m margins. Pool tolerances should be carefully considered from the outset, especially if movable floors, booms or any timing equipment are required.

Section profiles and water depths

Differing pool profiles are shown in the indicative design options. These include a sloping floor from 1.0 m - 1.8 m and a constant depth pool with a movable floor and submersible boom. The maximum pool depth of 1.8 m meets the requirements of any competitive swimming, lower level water polo competition and minimum depth for synchronised swimming training.

Access to the pool tank

The indicative designs include a range of provision to allow safe, easy and convenient access for all users:

- Recessed ladders
- Recessed stairs
- Platform lifts
- Movable hoists.

Further enhanced access and increased accessibility could be achieved with portable steps and ramps. The recessed stairs would be 'retractable' when associated with a movable floor to automatically match the depth of the water.

Pool ends

Standard (non-raised) ends are included with fixings for turning boards and higher starting blocks where required for training or competition. This arrangement takes up less pool surround space than permanent raised ends and would be less expensive to construct and be more flexible in terms of community use, allowing better access to the pool tank from the ends.

Pool surrounds

The standard recommendations for pool surround dimensions have been fully reviewed from first principles and compliance with BSEN 15288 Part 1 2008. A minimum clear surround dimension of 1.5 m is required for pool circulation space around the tank. This will provide a convenient width for two people to pass, plus a 0.5 m zone for standing officials. In addition, at the pool ends an additional zone of 0.6 m is included for starting blocks where required for community galas, plus 0.9 m for swimmers to stand behind the blocks: this establishes a minimum dimension of 3.0 m at the start and turn ends (4.0 m in options 2 and 3) and 2.0 m at the sides, clear of swimmers seating. The design of the channel grating and its proximity to the pool edge will also affect the amount of dry pool surround and therefore the closer to the edge of the pool this can be designed, the greater the depth of dry pool surround.

Spectator and swimmer seating

The area provided for seating can add significantly to the cost of a project and the requirement for this and the frequency and level of any competitive events should be considered. The indicative designs assume community swimming, training and only small scale competitions. For this reason, no permanent seating for spectators is provided. Controlled access can be provided to the pool hall to temporary seating (and pool surround benches) on the poolside for small school / community galas.

The pools have been configured to provide informal viewing to the pool hall from the foyer and cafe, and direct access to the poolside from these areas for temporary poolside spectator seating for galas.

Pool storage

A store room is provided for pool equipment (including timing equipment), teaching aids, cleaning equipment, etc. The anti-turbulence lane ropes are the largest items (9 no. 100 mm diameter are required for day to day use) and would be stored on portable trolleys in a dedicated poolside storage area.

Typical equipment to be stored in the pool store may include:

- Lane rope reel and standard lane ropes (in addition to 9 no. 100 mm anti-wave ropes, assumed use in pool for any swimming competition or water polo use) - 1.85 m long x 1.35 m wide x 1.65 m high
- Trolley for 16 no. timing pads
- 8 no. starting platforms c0.5 x 0.5 m and 0.5 - 0.75 high
- Turning boards (if no raised ends)
- General competition equipment, false start mechanism, back stroke warning flags, etc.
- Folding water polo goals
- Teaching equipment
- Water polo balls
- Pool robotic cleaners
- Poolside scrubbing machine
- Pool safety equipment.

Equipment, to be stored elsewhere in a dry environment, may include computer equipment to be used in conjunction with timing equipment. If canoes and sub-aqua are required, additional storage could be provided.

Scoreboard

If needed, a scoreboard will be located where it can be viewed by both swimmers and spectators.

Cameras

Built in underwater viewing cameras are not included in the design and it is assumed that portable equipment would be brought in as required to support training activities.

Wet changing facilities

The changing areas are sized for maximum community use and the standard calculations³ have been used for the number of changing places. The layouts include a combination of unisex changing cubicles and separate male / female or group changing rooms. This is intended to give a variety of customer choice and comfort levels for the range of overlapping activities in the programme of use.

The designs locate the wet group changing adjacent to dry changing rooms that serve the sports hall. Interconnecting doors to this 'buffer' changing give more flexibility in times of heavy use, as well as economy in the servicing of the building.

The method of calculation provides comfortable changing conditions for a community swimming pool facility. However, a different style of changing, e.g. more group changing or a reduction in provision, may be appropriate for some projects and should be considered on a case by case basis.

Group change and showers

The group changing rooms with bench seating for 20 people are provided for school use and can be locked to secure clothing during the lessons. Each room is provided with three showers and a WC. The rooms can also be used by other groups and by swimmers who prefer an open plan single sex changing arrangement. The doors are fitted with variable door signage that can be easily re set by the supervisory staff.

Changing village cubicles

The remaining provision is in the form of a unisex changing village. Four person family accessible cubicles are provided, together with single person and two person sized cubicles for economy and to meet a key requirement for changing for swimming lessons, where parents may need to assist their children to change.

Accessible wet changing

Accessible wet changing provision is in accordance with the British Standards and worked example in the Sport England Guidance Notes. 2 no. dedicated accessible changing rooms are included, as well as a 'Changing Places' facility. In addition to these dedicated facilities, the group changing rooms and 6 no. family changing cubicles will provide further accessible changing facilities.

³ To standard method in Sport England 'Swimming Pools Design Guidance Note'

Lockers

Lockers have been calculated in accordance with the standard method³, based on all users having access to a locker. In addition, lockers for school groups will provide additional flexibility, allowing group changing rooms to be vacated and used again by other groups or individuals, enabling the changing provision to be used efficiently and to maximum potential.

Changing village showers

Open pre-swim and enclosed showers are provided. The total shower provision, including the showers in the group change, pre-swim, accessible and enclosed showers, has been calculated in compliance with BSEN 6465 Part 1 2006.

Vanity area

Spaces are provided, calculated on the standard of 1 no. per 30 male users and 1 no. per 20 female users.

Male and female toilets

The number of WCs, wash hand basins and urinals have been assessed as sufficient in relation to the facilities, with reference to BS 6465 Part 1:2006.

Accessible WC

Accessible WC's are provided within the wet changing and foyer areas, including baby change provision.

First aid

As the first aid room will serve all facilities within the Sports Centre, it has been centrally located near the foyer and core circulation. It has direct access to both the pool facility and the general circulation and is available at all times. External access is provided via a nearby door to an emergency vehicles bay.

Additional storage for large and essential first aid items which need to be directly accessible to the poolside, e.g. spinal boards, is provided within the pool store.

Cleaner's store

A store is provided in the wet change area for storage of equipment and materials. A second cleaner's store is provided at pool side. Space for large cleaning equipment is provided in the pool store.

Secondary pool

A learner pool of 20.0 m x 10.0 m and depth of 0.6 - 0.9 m with 7 m wide side entry steps is shown in some of the design options. The pool slopes across to allow lane swimming in a constant approx 0.6 - 0.9 m depth of water. Pool surrounds meet BSEN 15288 requirements for additional surround depth at the access points and for swimmer seating in between on one side.

Health and fitness / multi-purpose studio

Fitness gyms are provided in all options. In Options 1 and 2, 100 stations are provided and in Option 3 150 stations. The area provided for the gyms is based on a more intensive use compared to Sport England guidance. Similarly to the Affordable Sports Centre Document, the area is calculated on a maximum capacity of 4.5m² per person, rather than 5m² per person.

Two 25 person multi-purpose studios of 125 m² each are included in Options 1 and 2 and three multi-purpose studios of the same size in Option 3. Equipment stores of c15m², are provided for the health and fitness areas and multi-purpose studios. A health and fitness assessment room is also provided.

Consideration could be given for the inclusion of a small facility for making drinks and serving food prepared elsewhere, as this would allow the studios to be used for functions.

Separate male and female changing and toilets are provided on the same floor level as the health and fitness facilities and multi-purpose studios. The changing rooms have space for 76 people in Option 3 and 52 people in Options 1 and 2, incorporating showers, WCs, wash hand basins. Lockers are provided in the first floor circulation space. Provision of some cubicle changing could be considered, but would increase the spatial requirements of the changing room and reduce the number of bench spaces provided.

The group changing rooms include provision for baby change.

Sports chair zone

All areas of the building are designed to be suitable and accessible for users with normal width wheelchairs. 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 and

reception to the sports hall and includes space for wheelchair storage and for people transferring from their day chair to their sports chair.

Sports hall

A 5 court sports hall, 40.6 m x 21.35 m x 7.5 m high is provided to be suitable for a range of community sports. It has a division curtain to divide into two separate areas and provide greater programme flexibility. The adjacent equipment store has an area of 12.5% of the hall and access into both halves of the hall. The changing rooms incorporate toilets and showers and can be used as group changing or segregated male / female as required.

The total capacity of 60 changing spaces will meet the change-over requirements of school groups, as well as providing additional changing for first floor Health and Fitness facilities if required during peak periods. Lockers are provided in the access corridor for easy supervision, user convenience and to give additional capacity at peak times in the health and fitness areas and to suit 2.5 times changing capacity (152 lockers).

No formal spectating is provided in this Affordable model. Informal spectating is available through glazed screens from the circulation area and, depending on the layout of the courts within the sports hall, temporary spectator seating can be accommodated for particular sports uses. If required for a particular scheme, consideration can be given to the provision of a first floor viewing gallery.

Further facility options

Studio pool

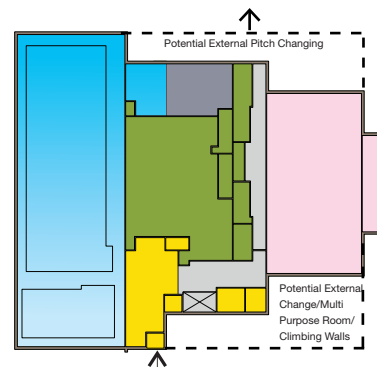
As an alternative to a learner pool with a stepped entry, the secondary pool could be configured as a 1.8 m deep studio pool with a movable floor that allows the depth to be adjusted to suit various user groups.

Variable temperatures / privacy screens

The water temperature in the learner pool (or studio pool) would normally be set at a higher temperature than the main pool to suit disability and teaching groups. In addition, if this is provided within a screened separate enclosure, this will also accommodate both cultural diversity requirements and single sex sessions.

Other potential options

The layouts allow for the addition of further facilities at both ground and first floor levels. For example, a feature climbing wall could be added adjacent to the entrance / foyer, and a multi-purpose room / studio included alongside the sports hall.



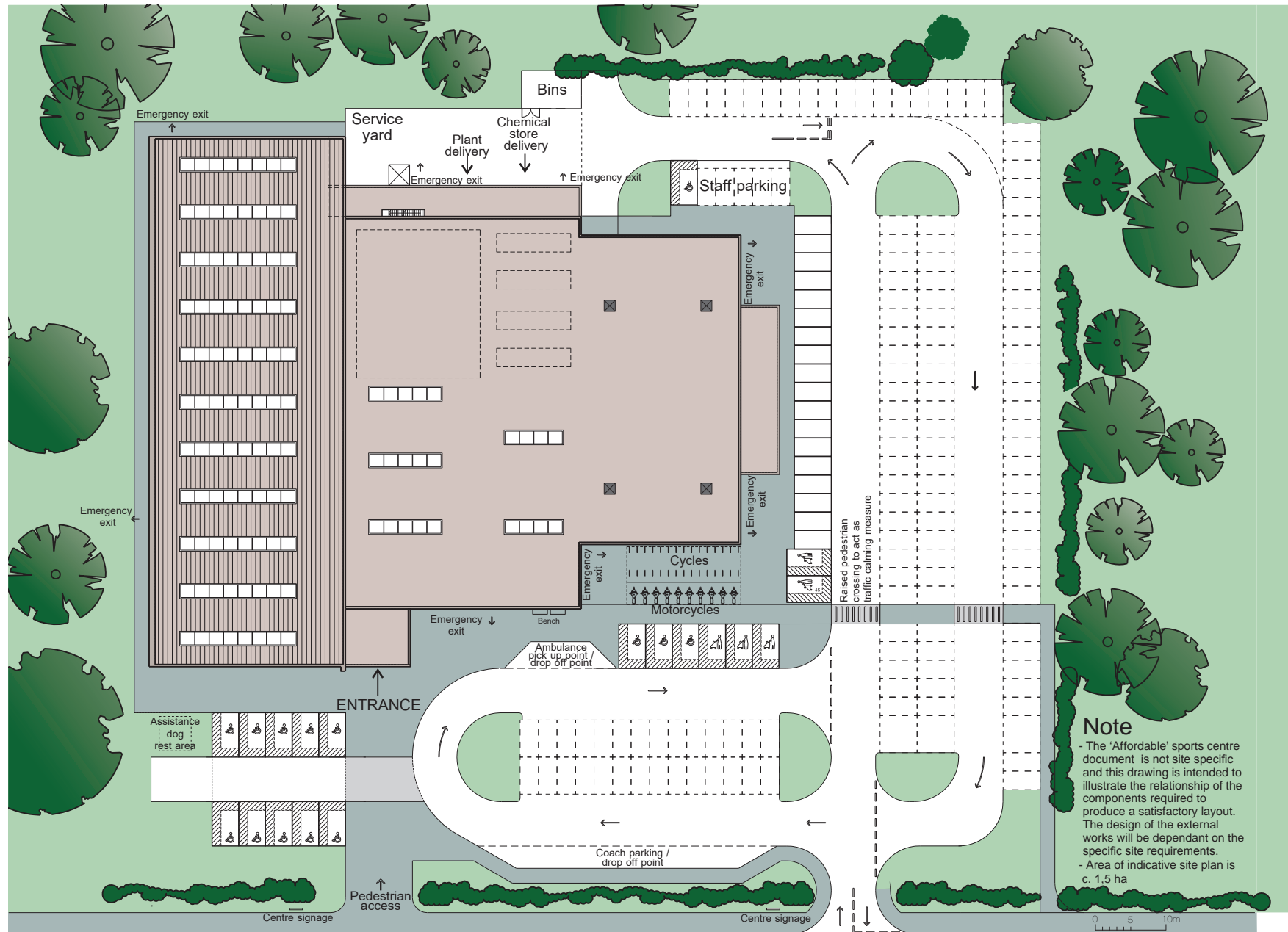
External view towards entrance



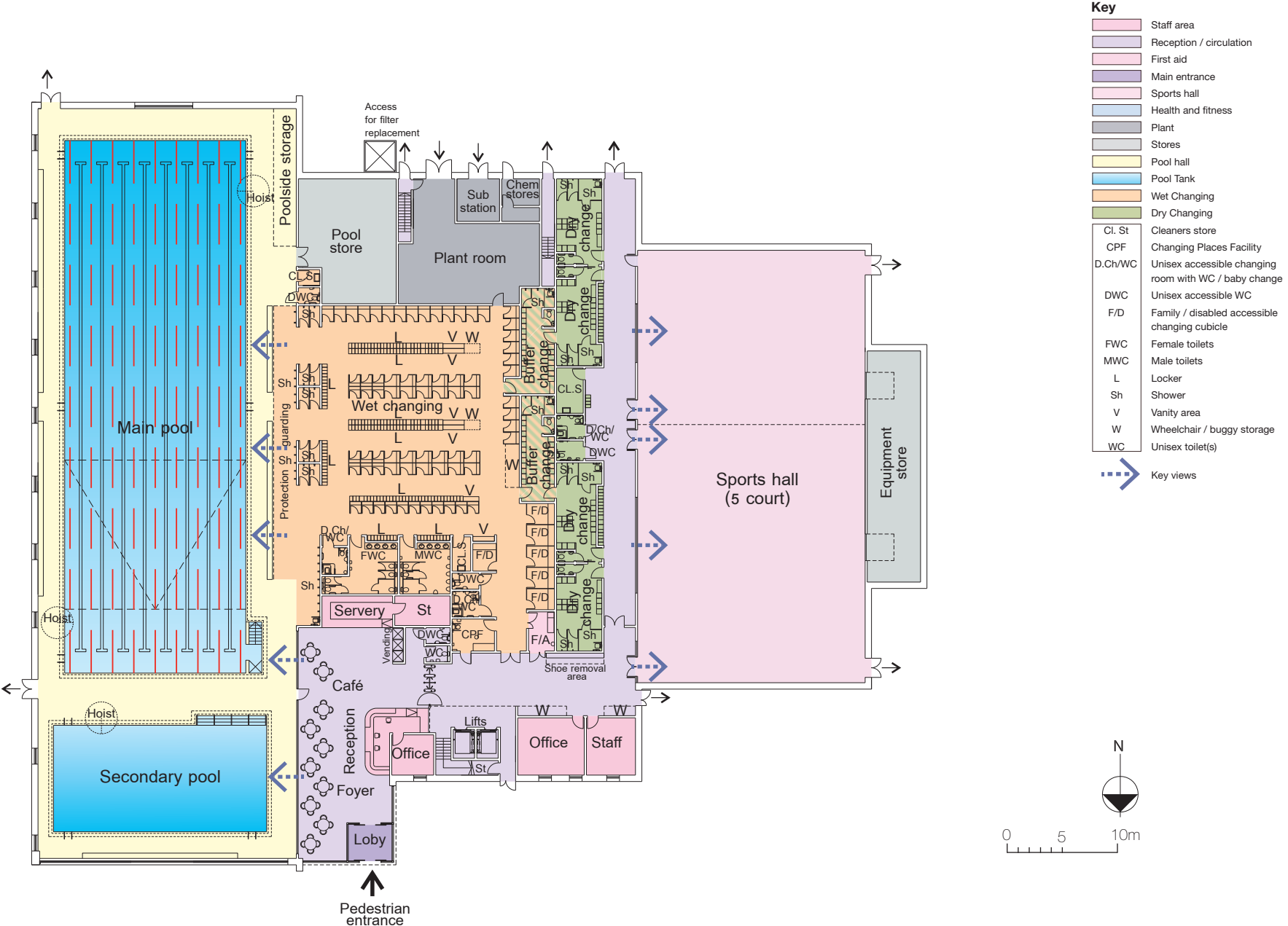
External view towards swimming pool

Example: Option 3 'Affordable' sports centre

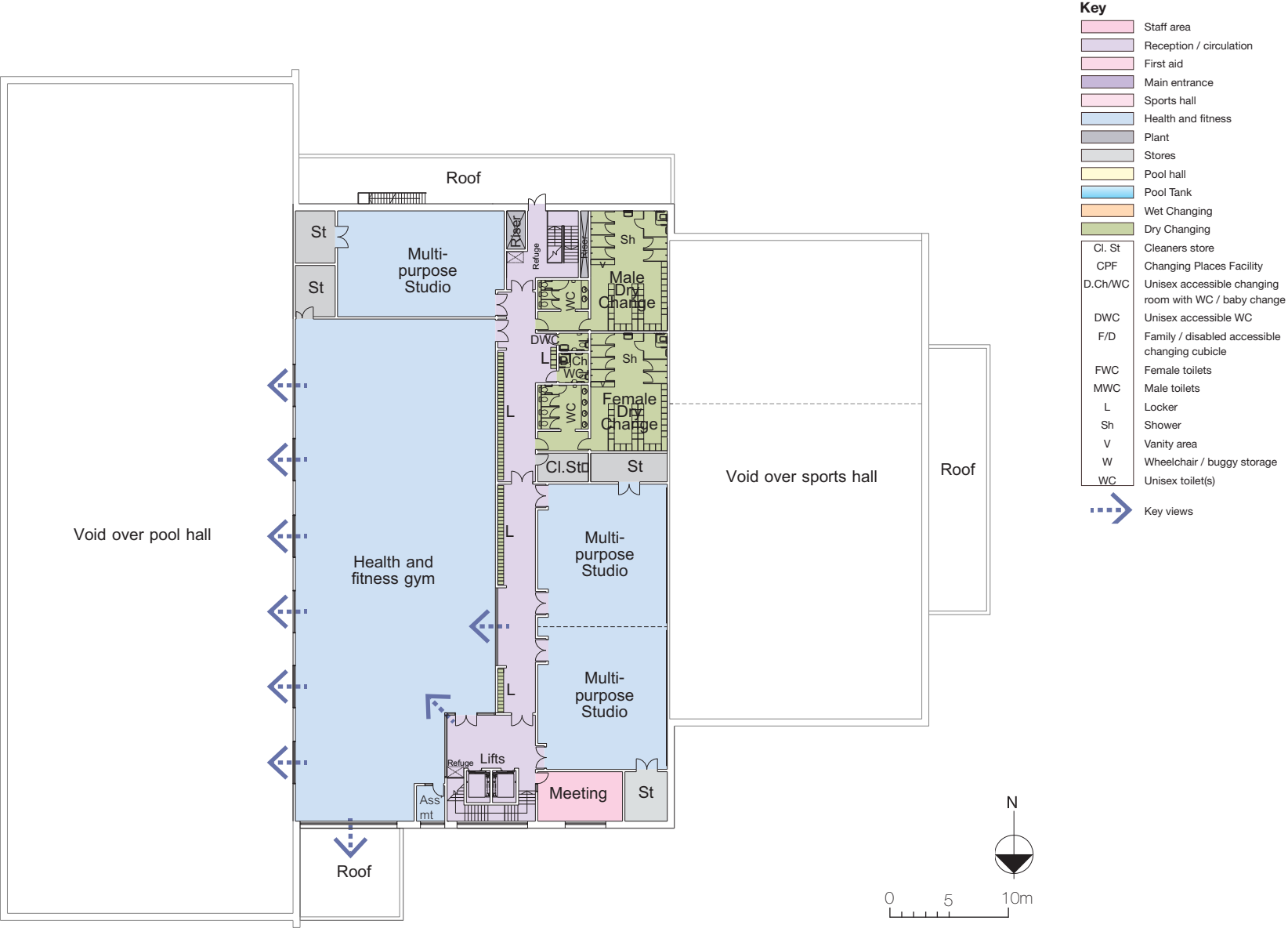
Site plan



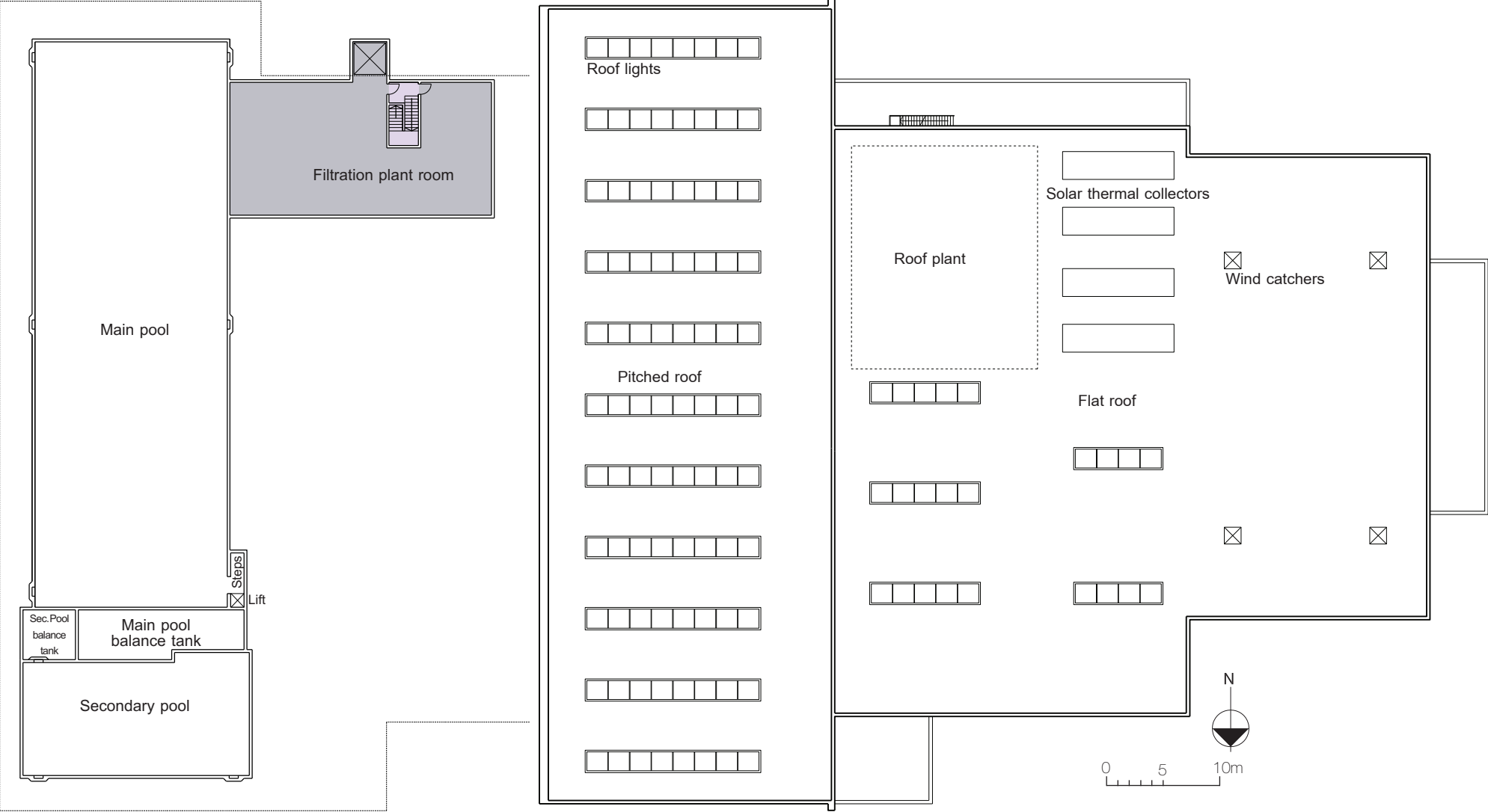
Ground floor plan



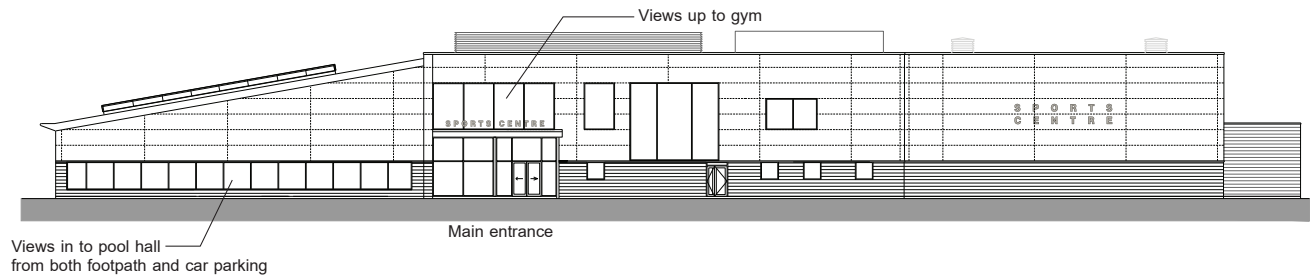
First floor plan



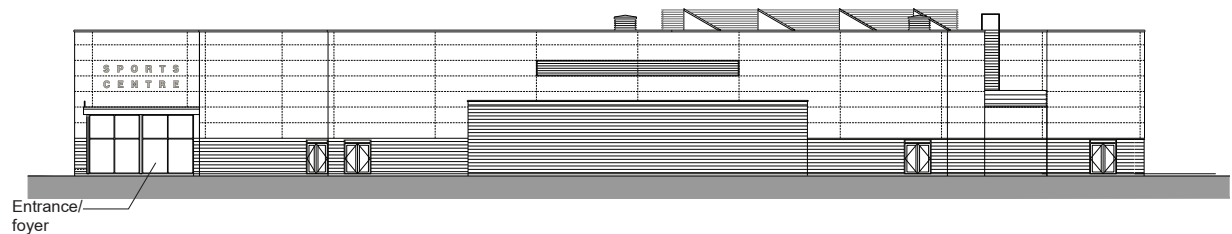
Basement and roof plans



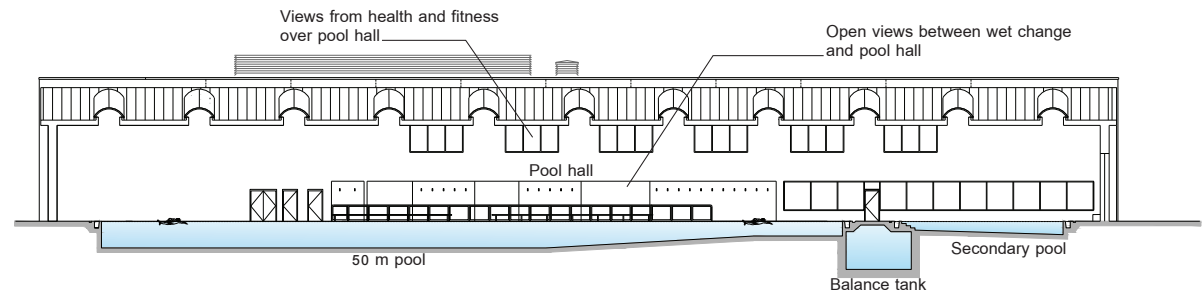
Elevations and sections



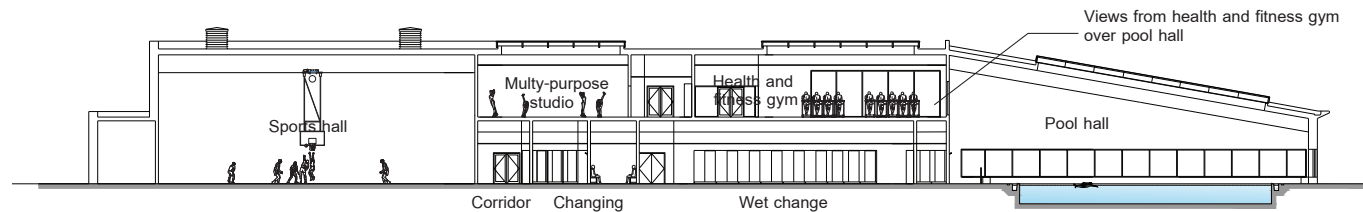
Front Elevation (North)



Side Elevation



Longitudinal Section



Typical cross Section

Potential income

Introduction

This section identifies the main operational considerations and implications for a sports centre with a community 50 m x 8 lane pool, with or without a secondary pool and other fitness facilities.

A 50 m community pool can be cost effective and is better able to break even in revenue terms, if the appropriate additional facilities are developed around it. Without additional facilities, significantly lower levels of revenue generation will be achieved that might only be sustainable in specific circumstances, such as on a University campus. In general, a stand-alone 50 m swimming pool would have limitations as a community facility and, for this reason, is not modelled in this document.

The majority of community swimming pools have required an operational subsidy, often due to historical design restrictions and management policies employed. The tables on the following pages are a generic illustration of potential income and expenditure differences between the different sized facilities based on an 'optimum' operating model. This shows that subject to the adoption of a modern operating philosophy a 50 m pool can result in a break-even position. The figures are indicative and not specific to any geographical location or catchment area. Both these factors can impact on how a specific facility needs to be programmed and operate, and will influence the size and mix of additional facilities that are required. The challenge for operators is to manage facilities as cost-effectively as possible and a number of suggestions as to how this can be achieved are made in this section.

Potential management arrangements

For a 50 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 operational philosophy, programming, pricing, and staffing levels may vary depending on the local context. In turn these will influence the levels of income generated and the expenditure incurred and hence the net profit or subsidy. 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 three options developed are described in detail in the Introduction chapter; only Option 1 includes a movable floor over half the pool. All options include a 5 court sports hall. Options 1 and 2 include 2 studios and a 100 station fitness suite. Option 3 includes 3 studios and a 150 station fitness suite.

Pricing, user numbers and staff structure assumptions

The indicative revenue models have been developed from programming, throughput and pricing data, reflecting existing 50 m pools, together with data from the ASA and the leisure industry. The prices used in the modelling are the same as in the Affordable Sports Centres (ASC) model, but inflation has been applied to the income figures to reflect changes since the previous ASC models were developed. The revenue modelling does not include 'below the line' costs, as these are different for every Leisure Centre project, given that site, location, how the capital cost is funded, etc. 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 local competition.

Swimming lessons have been based on the assumptions below. See Appendix 4 for indicative pool configurations.

- 4 teaching spaces per 25 m pool water but recognising that some operators will use 6 spaces per 25 m
- Option 1 - length way split of pool forming 4 community swim lanes and 6 lesson teaching spaces
- Option 2 - length way split of pool forming 4 community swim lanes (50 m length) and 4 lesson teaching spaces + 4 learner pool teaching spaces
- Option 3 - length way split of pool forming 4 community swim lanes (50 m length) and 4 lesson teaching spaces + 4 learner pool teaching spaces
- Option 1 assumes that one 23.5 m area be programmed for lessons and classes, leaving the other 25 m for lane / fitness swimming, casual swimming, etc.
- 30 minute lessons, with average 8 persons; beginner classes will be fuller, and more advanced classes less full
- Learner pool size 20 m x 10 m

Table 1 - Income (£)

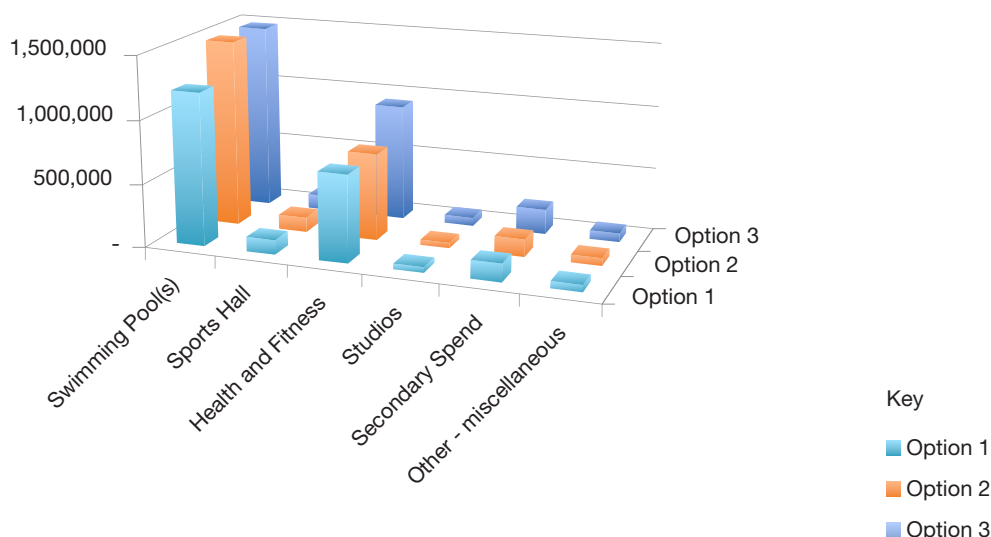


Table 2 - Expenditure (£)

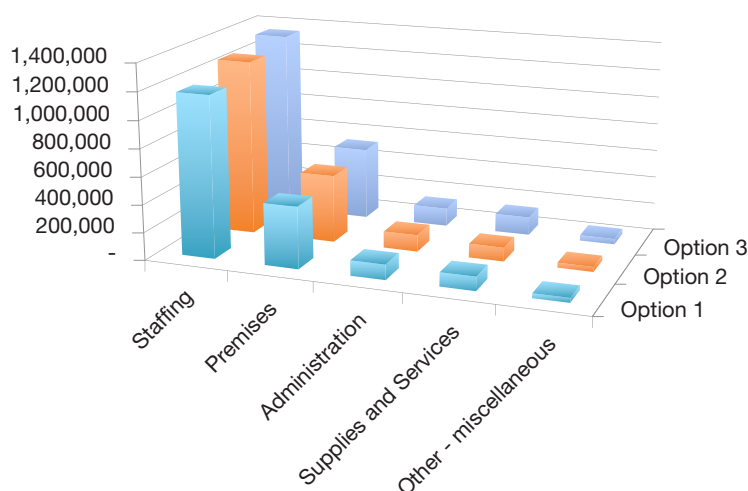


Table 3 - Business plan

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 2012 prices used in ASC 5 (25 m pools) Overall income and expenditure inflated (by 5% to reflect 2 years of inflation at 2.5%) to align with 2014 current pricing and costs in relation to ASC 5 25 m pool modelling All figures are net of VAT where it applies Assumes a membership package that allows for free swimming and classes Assumes a 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 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 Cost of capital calculated on Local Authority funded basis, i.e. 4% interest over 30 years No depreciation included Maintenance costs assumed as 1% of total capital build cost Income assumptions assume relatively affluent area with some minor competition, hence income projections nearing upper quartile Assumptions for swimming lesson numbers are as page 19 Fitness classes based on 45 minute sessions; classes based on 20 paying customers in addition to members who make up remainder of 25 / 30 class size 			
Budget Summary			
Income and Expenditure	Mature year (3) Option 1	Mature year (3) Option 2	Mature year (3) Option 3
Income			
Swimming Pool(s)	1,210,625	1,482,050	1,482,050
Sports Hall	115,327	115,327	115,327
Health and Fitness	689,066	689,066	924,674
Studios	43,588	43,588	64,586
Secondary spend	142,606	138,410	196,204
Other - miscellaneous	55,030	61,711	69,571
Total income	2,256,242	2,530,152	2,852,412
Operational Expenditure			
Staffing	1,172,109	1,272,635	1,340,991
Premises	447,666	491,891	523,989
Administration	109,424	120,999	131,252
Supplies and Services	100,372	101,146	132,127
Other - miscellaneous	32,873	35,702	39,368
Total Expenditure	1,862,444	2,022,373	2,167,727
Operational Profit / (Loss)	393,798	507,779	684,684
Throughput	679,076	753,251	830,494

Budget Detail				
		Mature year (3)	Mature year (3)	Mature year (3)
	Income	Option 1	Option 2	Option 3
	Swimming			
	Casual	610,786	756,211	756,211
	Lessons	424,620	550,620	550,620
	Schools	46,069	46,069	46,069
	Clubs	113,400	113,400	113,400
	Other	15,750	15,750	15,750
	Swimming sub-total	1,210,625	1,482,050	1,482,050
	Sports hall			
	Courses	24,926	24,926	24,926
	Clubs	31,500	31,500	31,500
	Schools	12,768	12,768	12,768
	Pay and Play (casual)	46,133	46,133	46,133
	Sports Hall sub-total	115,327	115,327	115,327
	Health and Fitness			
	Memberships	602,966	602,966	838,574
	Pay and Play	86,100	86,100	86,100
	Fitness sub-total	689,066	689,066	924,674
	Studios			
	Classes/courses	24,819	24,819	38,598
	General Hires (meetings)	18,769	18,769	25,988
	Studios sub-total	43,588	43,588	64,586
	Secondary spend			
	Merchandising	35,652	39,546	21,800
	Vending	106,955	98,864	174,404
	Secondary sub-total	142,606	138,410	196,204
	Miscellaneous income	55,030	61,711	69,571
	Total income	2,256,242	2,530,152	2,852,412

Contd...../	Mature year (3)	Mature year (3)	Mature year (3)
Operational expenditure	Option 1	Option 2	Option 3
Staffing			
Direct Staff costs	923,738	1,003,275	1,057,350
On costs	189,410	205,380	216,447
Other Staff costs	58,962	63,980	67,194
Staffing sub-total	1,172,109	1,272,635	1,340,991
Premises			
Utilities (Gas/Electricity)	232,554	255,528	272,202
Water/Sewerage	23,255	25,553	27,220
Insurance	29,069	31,941	34,025
NNDR	29,069	31,941	34,025
Building maintenance and repairs	58,139	63,882	68,051
Equipment purchases	17,442	19,165	20,415
Equipment rental	5,814	6,388	6,805
Equipment maintenance and repairs	5,814	6,388	6,805
Maintenance contracts	17,442	19,165	20,415
Chemicals	20,348	22,359	23,818
Trade waste collection	8,721	9,582	10,208
Premises sub-total	447,666	491,891	523,989
Administration and Marketing			
Design, marketing and advertising	33,844	37,952	42,786
Postage	5,841	6,388	6,805
Printing and stationery	8,721	9,582	10,208
Photocopier	5,814	6,388	6,805
Security charges	8,721	9,582	10,208
Bank charges	11,628	12,776	13,610
Professional fees and licences	11,628	12,776	13,610
Telephone	11,628	12,776	13,610
Sundries / general expenses	11,628	12,776	13,610
Admin and Marketing sub-total	109,424	120,999	131,252
Supplies and services			
Cleaning supplies	14,535	15,971	17,013
Items for re-sale	71,303	69,205	98,102
Miscellaneous expenses	14,535	15,971	17,013
Supplies and Services sub-total	100,372	101,146	132,127
Miscellaneous expenditure / contingency	32,873	35,702	39,368
Total operating expenditure	1,862,444	2,022,373	2,167,727
Net operating surplus / (Loss)	393,798	507,779	684,684

Complementary development

The provision of a community 50 m swimming pool is part of a multi-sports centre and 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. It is possible to section off two lanes for fitness swimming and leave the rest available for casual recreational swimming. Other uses are less compatible and some will require privacy and exclusive use (as discussed later as a potential advantages 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 minimum level of stations in the fitness suite needs to be 100 (as in Options 1 and 2). This should include a combination of cardio and resistance machines. As shown in Option 3, providing 150 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 £235k per annum, and the additional studio adds a further £20k of revenue per annum, compared to Option 2. This revenue generation increases the level of operational profit, before any below the line costs are taken into account. Option 3 has the highest level of operational profit all the options at £684,684. In comparison Option 2 generates an operational profit of £507,779, and Option 1 £393,798. 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.

In addition to the fitness suite, a number of multi-purpose studios should be provided. A minimum of 2 studios 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 would provide a dedicated space which is easily adaptable for future fitness trends, maximise income generation and enable provision of space for aerobics classes, spinning, yoga, pilates, etc.

Option 3 represents the optimum fitness facility mix in terms of the sustainable development and operation of a 50 m pool. The exact level and nature of fitness and studio provision in any one facility will need to reflect the requirements of the local community, its location and, critically, the nature of existing community leisure provision in the local area.

Sports hall

The inclusion of a 5 court sports hall in all options provides an additional activity and income-generating area. Whilst the income assists the overall affordability of the 50 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. However, 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 50 m pool scheme will depend on the locality, and existing levels of hall provision.

Other potential complementary provision

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 sports centre, given their income-generating potential.

Catering and vending

The revenue models developed assume that catering and vending are required in each of the affordable 50 m pool options developed. The scale of the catering 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.

Each of the models assumes that the catering is operated by an external body, either as a franchise or a lease arrangement. This reduces the operational risk to the leisure operator, irrespective of whether this is in-house or external. The approach gives a guaranteed level of monthly / annual income, regardless of the number of people using the catering facilities and the revenue generated.

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.

Key factors for a 50 m community swimming pool to break-even include:

- **Commercial management philosophy**
- **The nature and scale of the facilities developed as part of the overall facility mix**
- **Whether there is a separate learner pool, or if this function is included in the main pool**
- **Realistic pricing structure**
- **Imaginative, varied and full programming**
- **Dynamic marketing and promotion**
- **Lean staffing structure**
- **Tight controls on expenditure**
- **Flexibility of the water space.**



8 lane pool with learner pool v 8 lane pool with boom and movable floor

In developing the options for the affordable community 50 m pool, it has become evident through the revenue modelling that an 8 lane pool with a separate learner pool (as in Options 2 and 3) can provide a higher degree of flexibility in relation to programming. It therefore has greater revenue generating potential than an 8 lane pool with the learner pool function incorporated into one end as in Option 1. Clearly, Option 3, which has a larger fitness suite (150 stations) and 3 studios (25 persons each), generates the most income of all the options with a figure of £2.8m per annum.

Option 1 includes a movable floor over one half of the pool, with a central boom. This effectively creates a 25 m length and a 23.5 m length that is separated by a 1.5 m boom within the 50 m pool length and would mainly operate in a 50 m mode for squad and club training. For the majority of the time it would be programmed as two separate water areas, ensuring that lane swimming (25 m) and shallow water was available at all times to suit the programme of use. This option has been developed as part of the modelling to provide a greater area of shallow water than provided in a separate learner pool.

Whilst there is a marginal difference between the operational expenditure of an 8 lane 50 m pool with a learner pool (Option 2) compared to a 8 lane pool without a separate learner pool (Option 1), Option 2 generates significantly more income from the water space. Option 2 also has a higher throughput and higher levels of income per visit, more income generated per m², and a better recovery rate than Option 1.

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. However, overall Option 3 has the highest level of throughput at approx. 830,494 per annum. Option 3 also has the best overall recovery rate of all the options modelled and the highest spend per head at £2.61.

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 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 2 and 3). Importantly, a separate learner pool which is screened off from the main pool, can benefit activities that need greater privacy. For example swimming sessions for women only and culturally diverse and 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).

Booms and movable floors

An 8 lane pool can be designed to incorporate both movable floors and a boom to enable it be used as two water spaces, 25 m and 23.5 m long (Option 1). It could also be designed to have two booms and a number of moveable floors, depending on the usage configurations required. However, it is important to highlight that booms and floors require time and staff resources to operate and this needs to be taken into account in the pool programming and the cost benefit analysis.

Providing two water spaces effectively means there is a choice in terms of which pool has the movable floor. A learner pool with a movable floor becomes, in effect, the teaching and introductory water space, with the main pool being used for lane and casual swimming, squad training and competition, aqua classes, inflatable and family sessions.

Reduced width boom configuration

Further programming options are possible for Options 2 and 3 via the inclusion of a submersible hinged bulkhead for part of the width of the pool. This would allow 50 m swimming in a limited number of lanes and 25 m swimming in others that would be better suited to less confident swimmers (diagrams indicated in appendix 4). This is not included in the base affordable options, but is shown as an additional feature cost on page 32. Particular attention should be given to the safety implications of such an arrangement.

Programme and operational management challenges

There are several operational benefits of a 50 m 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 2 and 3 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 1 generates least operational profit. Option 2 generates a higher level of operational profit than Option 1. Option 3 generates the highest level of operational profit at £684,684. Given the above, it is evident that there is a greater return on capital in terms of revenue generation from Option 3 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 50 m pool, alongside long course usage for squad and club training, which should include:

- Learn to swim programmes (juniors and adults)
- Casual recreational swimming
- Fitness (lane) swimming
- Club sessions

- Schools
- Holiday programmes
- Competitive events

See Appendix 9 for indicative pool programmes.

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 50 m pool with a separate learner pool, 3 studios and 150 station fitness suite, i.e. Option 3, 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.

Linking a community 50 m pool with other leisure facilities that generate increased revenue and create larger appeal and footfall will result in operational efficiency.

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.

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.

Options 2 and 3 show an increase in marketing and related costs because a larger range of facilities, offering more activities, will require that more information is available on regular programmes and promotion of e.g. holiday and additional provision across a wider number of people within the catchment area.

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, it is conceivable for a community 50 m swimming pool to 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.

Every use of the pool is a potential income stream.

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 50 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 50 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 22.

Key factors to consider in the business plan include:

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

Secondary pool and movable floors

The introduction of a 'secondary' supporting pool can significantly enhance the flexibility and cost-effectiveness of a community 50 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 50 m pool in Options 2 and 3, 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 it is often more appealing to family groups with more competent members of the family using the main pool with other members using the smaller shallower secondary pool.

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 off-set the higher capital costs.

Options 2 and 3 provide more aquatic and dryside activities to more people, thus having a greater positive impact on the community. Most striking is the even better financial performance that is achieved with the inclusion of a secondary pool that can be programmed to complement the activities within the 8 lane main pool, plus an additional studio and a larger fitness suite (Option 3).

These findings are caveated, however, because there are so many variables.

Larger pools have the potential to operate more cost-effectively because:

- increased water space equals more flexibility in terms of programming and therefore income generation, despite increased operational costs
- a wider range of activities can be provided to more people, thus delivering more community benefit
- capital costs can be off-set within a few years.

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 2nd Qtr 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 included within 'External works allowance'
- External works based on a typical layout
- Incoming services assessed as a notional value assuming availability from existing infrastructure
- Preliminaries are based on an unrestricted site with a construction period of c17 months
- Sports hall equipment included
- Loose furniture and fittings excluded
- Movable floor included to Option 1 (23.5 m x 17 m plus submersible boom).

Capital costs summary

Elemental Cost Estimate	OPTION 1 8 lane 50m Swimming Pool with Moveable Floor and Submersible Boom 5 Court Sports Hall Medium Health and Fitness		OPTION 2 8 lane 50m Swimming Pool 20m x 10m Learner Pool 5 Court Sports Hall Medium Health and Fitness		OPTION 3 8 lane 50m Swimming Pool 20m x 10m Learner Pool 5 Court Sports Hall Larger Health and Fitness	
Gross Internal Floor Area (GIFA)	5592m ²		6115m ²		6499m ²	
	Total Cost of Element £	£/m ²	Total Cost of Element £	£/m ²	Total Cost of Element £	£/m ²
Substructure	1,413,000	253	1,457,000	238	1,457,000	224
Superstructure						
Frame	818,000	146	886,000	145	945,000	145
Upper Floors	199,000	36	212,000	35	232,000	36
Roof	1,065,000	190	1,145,000	187	1,139,000	175
Stairs	53,000	9	53,000	9	53,000	8
External Walls and Windows	782,000	140	849,000	139	884,000	136
External Doors	69,000	12	69,000	11	69,000	11
Internal Walls and Doors	468,000	84	473,000	77	487,000	75
Superstructure Elemental Total	3,454,000	618	3,687,000	603	3,809,000	586
Internal Finishes						
Wall Finishes	250,000	45	261,000	43	279,000	43
Floor Finishes	520,000	93	545,000	89	579,000	89
Ceiling Finishes	166,000	30	166,000	27	201,000	31
Internal Finishes Elemental Total	936,000	167	972,000	159	1,059,000	163
Fittings	1,090,000	195	446,000	73	453,000	70
Services						
Sanitary Appliances	87,000	16	88,000	14	89,000	14
Disposal Installations	56,000	10	62,000	10	66,000	10
Mechanical & Electrical Installation	2,867,000	513	3,150,000	515	3,361,000	517
Specialist Installations	626,000	112	818,000	134	818,000	126
Builders work in connection	175,000	31	199,000	33	209,000	32
Services Elemental Total	3,811,000	682	4,317,000	706	4,543,000	699
Building Subtotal	10,704,000	£1,914	£10,879,000	£1,779	£11,321,000	£1,742
Preliminaries	1,277,000	228	1,277,000	209	1,277,000	196
BASE CONSTRUCTION COST	£11,981,000	£2,143	£12,156,000	£1,988	£12,598,000	£1,938
Contingencies @ 5%	599,000	107	608,000	99	630,000	97
Professional Fees @ 10%	1,198,000	214	1,215,000	199	1,259,000	194
External works allowance	1,000,000	179	1,000,000	164	1,000,000	154
Incoming services / stats prov allowance	150,000	27	150,000	25	150,000	23
Typical sports hall equipment costs	54,000	10	54,000	9	54,000	8
Additional costs total	3,001,000	537	3,027,000	495	3,093,000	476
OVERALL ESTIMATED PROJECT COST	£14,982,000	£2,679	£15,183,000	£2,483	15,691,000	£2,414

Additional feature costs

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

Option	Description	Cost for Additional Pool Hall Feature
A	Addition of movable floor to the secondary pool	£315,000
B	Addition of submersible boom to main pool	£235,000
C	Addition of transverse boom to main pool	£295,000
D	Addition of 23.5 m x 17 m movable floor to main pool	£550,000
E	Addition of 17 m x 10 m movable floor to main pool	£280,000
F	Addition of half width submersible hinged boom to main pool	£190,000
G	Main pool cover - 2 systems (50 m x 17 m)	£45,000
H	Main pool cover - single system (25 m x 17 m)	£25,000
I	Pool cover for secondary pool (20 m x 10 m)	£15,000

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 50 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. 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 the scale of sports / leisure centres considered in this review, 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 Employers 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

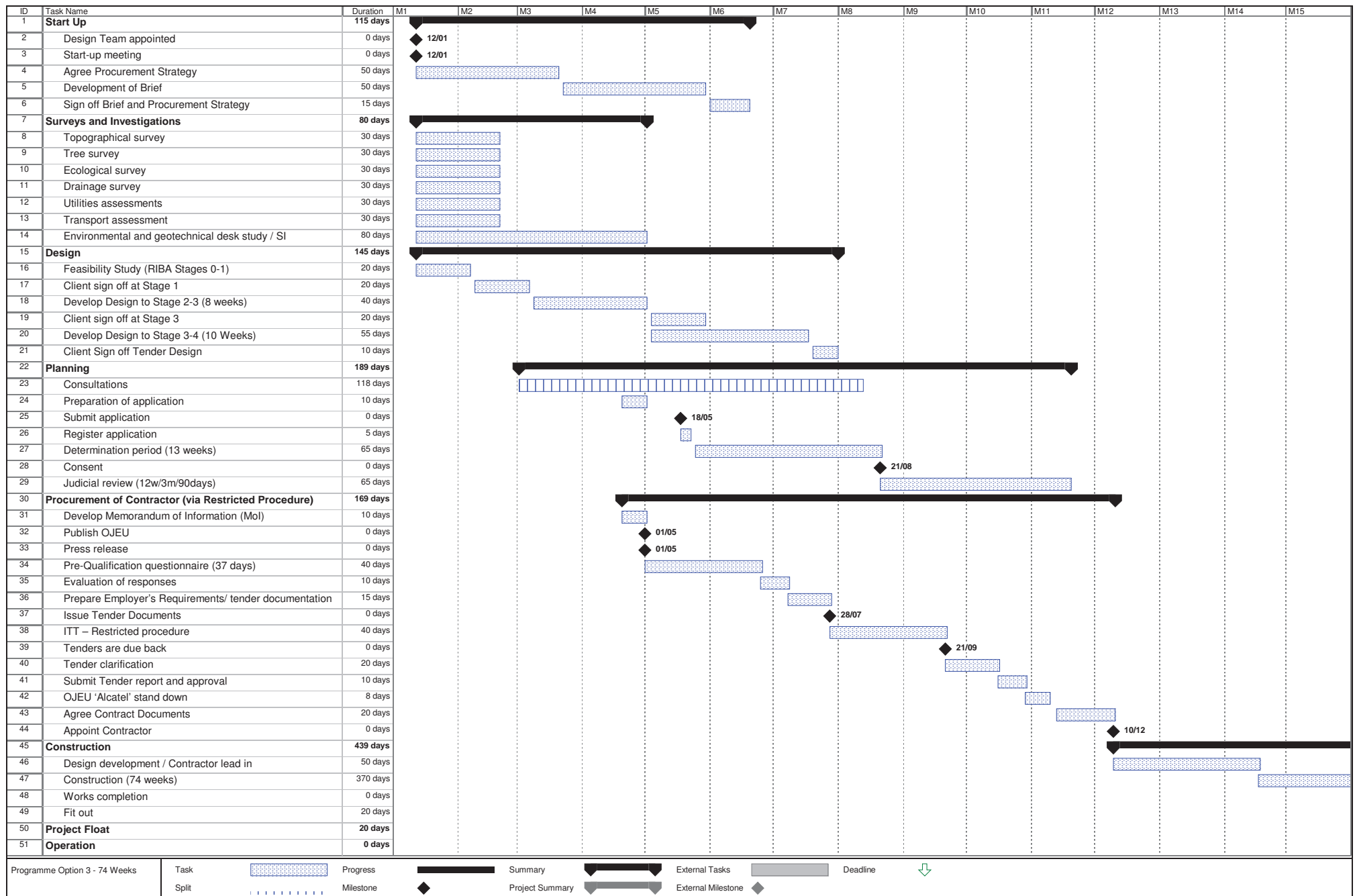
some key stage inspections as the works proceed on site. These costs should be factored in to the overall business case.

Construction programme

An outline indicative programme has been prepared to demonstrate the likely timescales for delivery of the 8 lane pool projects contained in this document. This shows that the project could be completed within 30 months (Option 3) 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.

The programme assumes a construction period of 17 months for the 8 lane (Option 3) community 50 m swimming pool sports centre building with an overall programme period of around 30 months.

A new Sports Centre with 8 lane community 50 m swimming pool can be opened within c2.5 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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Further information

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