

OUTLINE SPECIFICATIONS, DRAWINGS AND COSTS

APPENDIX 2

OUTLINE SPECIFICATIONS, DRAWINGS AND COSTS

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DRAWINGS

REGIONAL INDOOR TRAINING FACILITY
REGIONAL INDOOR ATHLETICS TRAINING FACILITY
NATIONAL INDOOR SPORTS ARENA
MUNICIPAL STADIUM
12-COURT SPORTS HALL
NATIONAL TRAINING CENTRE FOR CURLING
INDOOR VELODROME

1.0 OBJECTIVE

The objective of this appendix is to provide guidance on the outline requirements and costs for the construction of the sports facilities referred to in this pack. The guidance includes generic models, which should serve only as an indicative checklist and for reference during the preparation of the outline cost estimates for individual projects. The guidance should not be taken as definitive but does highlight many of the issues to be considered as well as providing benchmark costs for comparative purposes.

The following sections are split by facility, and provide information on the following elements:

- sport specific facility requirements;
- cost;
- cost drivers; and
- benchmarking on comparative buildings.

In order to illustrate the likely order of cost of each facility, guideline costs have been prepared and are included in this appendix. These guideline costs are based on benchmarking studies for generic facility types, and anticipate the application of innovation through the design process and cost efficiencies derived from this. The costs are not based on any particular design information or specific locations. In consequence the costs do not reflect any particular design solutions, location factors or other site constraints. All costs are at current price levels and therefore do not reflect any development timetable.

The costs are provided for guidance only and should not be relied on by applicants in formulating their proposals.

Note. The costs provided in this appendix assume that the project is founded on a large flat site with no access difficulties, using a traditional procurement route. The costs are based on August 2003 prices for a competitive tender in Central Scotland, and exclude VAT, consultants' fees, furniture and fittings, etc.

2.0 REGIONAL INDOOR TRAINING FACILITY

The following information is based on the construction of an indoor training facility incorporating a full size 'new generation' synthetic grass pitch, and a specialist indoor athletics training area.

An option to provide spectator seating for 1,400 is also shown for information purposes. Where spectator seating is to be provided, the design should allow for clear unimpeded views for spectators over the pitch area.

2.1 Specific Requirements for the Pitch

The playing surface must be constructed in 'new generation' synthetic grass and have dimensions of 105 x 68m, to comply with UEFA standards. There should be a minimum 3m margin around the perimeter of the pitch, providing an overall carpet size of 111 x 74m. The installation shall conform to the requirements of '*BS7044: Part 4:1991 Specification for Artificial Sports Surfaces*', and the '*Commission of Enquiry into Football League Requirements for Synthetic Surfaces*'.

There must be a clear minimum floor to ceiling height of 20m over the centre of the pitch, reducing to a minimum of 15m at the eaves, or the side of the pitch, as appropriate. Whilst the pitch will be used principally for football training, other sports can use the surface if considered suitable.

2.2 Specific Requirements for Athletics

135m long 6-lane synthetic surfaced sprint straight with areas for jumping and throwing. The track should be constructed fully in accordance with the *IAAF Track and Field Facilities Manual* and comply with all relevant British Standards.

The cost for providing this element as a stand-alone facility is provided below. Please refer to the drawing titled *Regional Indoor Athletics Training Facility (Indicative)* for details of this stand-alone option.

2.3 General Requirements and Options

Externally, a minimum of two natural grass-training pitches must be provided if not currently available on site. The pitches should be of a high quality with dimensions of 100 x 60m, and with a safety margin of 3m around the perimeter of each pitch.

5-a-side pitches may be included in the proposals where there is a demand, and that their inclusion will improve the overall economic performance of the facility.

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2.4 Cost Drivers

2.4.1 Clear Roof Span

- Roof span is a significant cost driver. Once beyond a clear span of 60m, each additional metre results in a disproportionate increase in the weight and cost of the roof.

2.4.2 Internal Height

- The internal height required also has a significant effect on cost. The greater the height required the greater the impact on structure and external envelope.

2.5 Cost Summaries

Building Works

Indoor Training Pitch	8,214	M ²	£870	£7,146,180
Indoor Training Facilities Area	6,135	M ²	£640	£3,926,400
Total				£11,072,580

External Works

Outdoor Training Pitches	2	nr	£300,000	£600,000
Floodlighting (per pitch)	2	nr	£50,000	£100,000
5-a-side Courts	10	nr	£40,000	£400,000
Floodlighting	10	nr	£15,000	£150,000

Car Park/ Landscaping

Participants - Indoor Facilities	50	nr	£1,000	£50,000
Participants - 5-a-side Courts	50	nr	£1,000	£50,000
Total				£1,350,000

2.5.1 Options

(i) Spectator Accommodation

Extra-over for additional circulation space, staircases, lift and viewing gallery for 1,400 spectators.

Spectator Seating	2,600	M ²	£675	£1,755,000
Car Park/ Landscaping	100	nr	£1,000	£100,000
Total				£1,855,000

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(ii) Outdoor Changing

Extra-over for external changing block to service training pitches and 5-a-side courts.

Outdoor Changing Block	845	M ²	£600	£507,000
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2.6 Benchmarking

The table below identifies the cost per square metre of indoor pitches / training areas. All costs are current at August 2003 and at a Central Scotland location factor.

Project	M²	£/m²	£
National Football Centre	8,530	1,052	8,972,102
Sutton Arena	4,932	737	3,634,292

3.0 NATIONAL INDOOR SPORTS ARENA

The following information is based on the construction of an indoor competition sports arena with spectator seating for 5,000. The arena must incorporate a 200m long 6-lane synthetic surfaced athletics track with hydraulic bends, a 60m long 6-lane sprint straight and field events area for indoor competition.

The arena must also include a separate hall, which can be used for warm-up and training.

The design must allow for the inner track area to be used for indoor court sports.

Support facilities for strength and conditioning, fitness, meetings, office staff and other back-up facilities must be available on site. It is envisaged that the use of most of these facilities will be shared, with any duplication kept to a minimum.

3.1 Cost Drivers

3.1.1 Space

- A well-designed flexible space can support a range of sports, concerts, exhibitions and other events, increasing potential revenue earnings.

3.1.2 Arena Capacity

- The capacity is the principle cost driver, as the number of seats determines the size of the bowl, the extent of circulation and other facilities..

3.1.3 Clear Roof Span

- Roof span is a significant cost driver. Once beyond a clear span of 60m, each additional metre results in disproportionate increase in the weight and cost of the roof.

3.1.4 Flexibility of Seating Arrangements

- The requirement of flexible seating is driven by the combination of events for which the arena is designed. If the main event floor is designed for athletics, then up to 50% of the seating bowl will have to be moveable or retractable to adjust to court sizes required by other sports. Movable seating costs, on average, are 250% more than fixed seating. Flexible seating also reduces the amount of storage space available below the bowl. This may require a larger footprint or extra space outside the bowl.

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3.2 Cost Summary

Indoor Competition Arena	17,158	m ²	£1,000	£17,158,000
Car Park and Landscaping	400	nr	£1,000	£400,000
Total				£17,558,000

3.3 Benchmarking

The table below identifies the £/m² of four indoor competition venues projects and a cost model. All costs are current at August 2003 and at a Central Scotland location factor.

Project	M²	£/m²	£
EIS Manchester	8,421	904	7,614,022
Sheffield Centre	19,250	1,015	19,530,370
Arena Cost Model	22,500	1,398	31,465,730
Odyssey Arena	22,508	1,239	27,890,650
Wales Indoor Athletics	8,500	951	8,086,568

The costs identify a range £900/m² to £1,400/m². The projects at the lower end of this range are not set up for large numbers of spectators. As more seating areas are introduced, the building area also needs to grow, and the cost increases.

4.0 MUNICIPAL STADIUM

The following information is based on the construction of a new stadium to meet the needs of athletics and rugby. It is, however, recognised that the refurbishment of an existing stadium may provide a more cost effective solution.

The facility will provide spectator seating for 5,000, with the option to increase to 10,000 if future demand requires.

The cost assumes that the main stand will include for areas for changing, office and hospitality. Support facilities for strength and conditioning, fitness, meetings, office staff and club merchandise etc must be provided within the design. It is envisaged that the use of most of these facilities will be shared, with any duplication kept to a minimum.

4.1 Specific Requirements for Athletics

400m – 8 lane synthetic surfaced athletics track with 10-lane sprint straight and warm up area to international standards. The track should be constructed fully in accordance with the *IAAF Track and Field Facilities Manual*, and comply with all relevant and current British Standards.

4.2 Specific Requirements for Rugby

One high quality floodlit 'reinforced' natural grass rugby pitch for competition use. The pitch dimensions will be 100 x 70m with a minimum dimension of 10m in the touchdown areas (max. 22m), and a safety margin of 5m around the pitch perimeter.

For costing purposes, it has been assumed that one outdoor 'reinforced' natural grass training pitch and one 'new generation' synthetic grass training pitch (each 100 x 70m), along with 'reinforced' natural grass specialist training areas will be constructed adjacent to the stadium, or in close proximity to it. It may be that one or more of these elements already exist, in which case they do not need to be provided from new. These areas should be floodlit.

4.3 Cost Drivers

There are a number of variables in stadium / grandstand design which have a significant impact on the design and cost of the building. These cost drivers need to be considered at an early stage of the design to ensure the stadium proposal is feasible from both financial and operational perspectives.

4.3.1 Gross Floor Area

- The GFA has a significant impact on cost. If the GFA increases but the capacity remains static, the overall cost per seat will increase.
- Hospitality areas such as bars, restaurants and corporate boxes increase the GFA and will generally be finished to a higher level than concourse areas.

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4.3.2 Pitch Level - Sunken Bowl

(the pitch and lower tier are excavated below the existing ground level)

- This reduces overall height, which may assist planning regulations
- Unwanted space below lower tier is not created
- No framed structure below the lower tier is required as the tier is constructed on the ground
- Excavation may be costly, especially if land is contaminated.

4.3.3 Shape – Radial

(continuous or circular bowl)

- Improved sightlines
- Potential aesthetic improvements
- Less efficient use of internal space due to curvature.
- Larger footprint required
- Increased cost of curved materials
- Increased difference from pitch for central viewing areas
- Construction cost premium of up to 5% over orthogonal design on total stadium cost.

4.3.4 Shape - Orthogonal

- Simple structural design allows repetition of materials and structure
- Efficient internal space planning
- Smaller footprint possible
- Seating arrangement in closed corners are often aesthetically poor.

4.3.5 Primary Stand

- The primary stand (usually the West Stand) carries a higher cost than other stands. This may be due to larger hospitality areas in the prime viewing stand, changing rooms, offices, etc..

4.4 Cost Summary

Building Works

Main Grandstand	8,776	M ²	£1,000	£8,776,000
Ancillary Buildings	1,730	M ²	£500	£865,000
Running Track and Infield		Item		£1,500,000
Seating	5,000	nr	£240	£1,200,000
Total				£12,341,000

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External Works

Grass Training Pitch		Item		£300,000
Synthetic Training Pitch		Item		£450,000
Floodlighting (per pitch)	2	nr	£50,000	£100,000
Warm Up Area and Track		Item		£500,000
Car Park and Landscaping	500	nr	£1,000	£500,000
Total				£1,850,000

Options

The brief highlighted the need for temporary seating based on 5,000 spectators. The cost of this is not included in the above.

Temporary Seating	5,000	Nr	£130	£650,000
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4.5 Benchmarking

The table below identifies the £/m² for four stadium/ grandstand projects and two cost models. All costs are at August 2003 prices, with a Central Scotland location factor.

Project	Nr / Seats	£/seat	M ²	M ² /seat	£/m ²	£
Harlequins	3,872	1,146	4,072	1.05	944	4,437,777
Aberdeen	25,000	1,043	30,089	1.20	866	26,063,633
Hull	25,000	1,149	35,810	1.43	802	28,730,029
Huddersfield	8,500	1,996	10,894	1.29	1,557	16,962,209
Cost Model Type A	12,000	1,288	9,250	0.77	1,671	15,460,416
Cost Model Type B	2,250	668	2,300	1.02	654	1,503,096

Expressed as costs £/m² the costs identify a range from £800/m² to £1,600/m². Costs at the £800 end of the scale generally reflect a basic design and level of finishes. Costs near to £1,600/m² generally reflect a more complex design, two or more tiers, and a greater level of finish.

In terms of cost per seat, the range is £668 to £1,996/seat. This cost is a function of the building cost £/m² and the ratio of built area per spectator. Although common, this is not a particularly useful expression since in itself it provides no further explanations for differences that might appear between one set of costs and another.

The guideline cost for the Main Stand in the Municipal Stadium has been set at £1,000/m². A basic level of finish has been assumed with adjustments for the levels of hospitality and orthogonal shape.

4.6 Considerations for Existing Sites

It is recognised that proposals for the Municipal Stadia may be based around existing playing field sites. In such cases improvements might be limited to the construction of spectator grandstands. Applicants may find the following guidelines appropriate in these circumstances.

Accommodation Type	Seating Bank	Spectator Stand	Main Stand
Description	Simple uncovered, seating terrace, external concourse with separate concession points and toilet provisions	Covered stand with seating terraces, basic concourse, concession points and toilet accommodation	As spectator stand but including player accommodation, and facilities for premium/hospitality seats (suites, lounges etc) for approx. 5% of overall capacity
Area per seat	0.5m ² /st	0.85 - 1.25m ² /st	1.30 - 1.80m ² /st
Cost per seat	£220 - 300	£650 - 1,250	£1,300 - 2,000

5.0 12-COURT SPORTS HALL

The following information is based on the construction of a twelve-court sports hall including bleacher seating for c1,000 spectators.

5.1 Outline Specification for 12-Court Sports Hall

The internal dimensions of the sports hall will be 54m long x 33m wide with a clear uninterrupted height over the principle playing area of 9.1m. The hall will be capable of being subdivided by nets along its length into three modules of 4 courts and subdivided across its width into two modules of 6 courts and also one module of 9 courts and one module of 3 courts.

Lighting of the sports hall will deliver uniform levels of illumination across the hall, good colour rendering and avoid glare. The luminance level will not be less than 750lux but will be capable of providing different levels of lighting within the hall if it is divided or used for lower standard of play.

Playing surfaces in the sports hall must conform to BS7044 Part 4 (classified as general use, heavy duty and have impact absorbing qualities). A sprung or semi-sprung sports floor will typically be specified. Please note BS7044 will in time be superseded by CEN57.

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Ancillary accommodation of an appropriate level will be provided to allow the facility to function at national and regional and local levels standards of play and will include an appropriate fitness and conditioning suite, sports medicine centre, changing, showers, toilets and social areas.

Detailed design guidance can be provided if requested.

5.2 Cost Drivers

5.2.1 Hospitality Areas

- Welcoming foyers with catering facilities increase floor area but also increase revenue.

5.2.2 Flexibility of Seating

- Flexibility of seating arrangements. Retractable seating will cost more and there will be no storage space.

5.2.3 Internal Spaces

- Consideration needs to be given to the number of halls in the sports centre. Roof spans may be reduced by more halls but increases the number of dividing walls / finishes etc.

5.3 Cost Summary

12 Court Sports Hall	3,157	m ²	950	£2,999,150
Car Park/ Landscaping - participants	33	nr	1,000	£33,000
Car Park/ Landscaping - spectators	67	nr	1,000	£67,000
Total				£3,099,150

5.4 Benchmarking

The table below identifies the cost per square metre of four sports centre projects. All costs are current at August 2003 and at a Central Scotland location factor.

Project	M²	£/m²	£
EIS Bath	2,250	1,062	2,390,603
Talacre	2,800	1,250	3,499,271
Herschel	1,605	1,340	2,150,859
Bognor Regis	2,479	861	2,133,533
Cost Model	1,200	832	998,283

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The costs range from £850/m² to £1,350/m². Generally projects at the greater ends of this scale include more back of house areas, which require a greater level of finish. Projects at the lower end generally include the courts, changing facilities and foyer areas only.

6.0 50 Metre Swimming Pool

The Royal Commonwealth Pool (RCP) in Edinburgh is in need of major refurbishment or replacement to bring it up to modern standards for competition and training. The cost of refurbishment is difficult to estimate until the scope of the works have been identified and this is not possible at this stage.

The following information is based on the construction of a new competition/training facility to meet the national needs of Scottish Swimming as identified in the Data Sheet in Appendix 1. The rate for a new build to the standard required would be in the order of £2,100m². It is recognised, however, that the RCP could be refurbished to meet these standards and this is likely to provide a more cost effective solution.

6.1 Requirements of Scottish Swimming

A Level deck pool with raised ends that will be 50m in length and 8 lanes (21m) in width with a minimum depth of 2m. The pool should incorporate a moveable bulkhead and moveable floor, which must not compromise the stated dimensions of the pool. The pool shall be capable of catering for national standard competitive events and include appropriate equipment such as electronic timing and scoreboard. Provision for warm up swimming will be required during competitions. In addition, provision for competitors, officials, television, radio, and the written and photographic press will be required.

The diving pool will be of level deck construction and will incorporate provision to allow national standard diving including synchronised diving. The facility should include 1m and 3m springboards; 1m, 3m, 5m, 7.5m and 10m platform diving. The overall pool size will depend on which activities are to take place within the diving pool; however, it is recommended that the diving pool dimensions are precise subdivisions of 100m. Where the diving pool will be used for other activities a moveable floor should be incorporated.

Consideration should be given to the provision of dry training facilities to enable divers to practice their skills and learn new ones. A dry training facility would include a foam landing pit, parallel spring boards, movable platforms, trampolines, sprung floor area and safety rigs. In addition to the use for the training of divers, these facilities could be used by a number of other sports.

The facility must be able to accommodate water polo, for both competitions and training.

The facility will include appropriate ancillary accommodation necessary to function as a national competition pool, national diving centre and, also, accommodate community use.

The facility must be constructed to conform with the requirements of Scottish Swimming and comply with all relevant British Standards.

6.2 Cost Drivers

6.2.1 Usage

- If the centre is to be used for leisure or national competitions has a major influence on design standards, facilities, and cost. More spectator seating and better facilities are required if the centre is intended as a national sports venue.

6.2.2 Footprint

- Incorporation of a leisure pool may increase revenue potential, but impacts on footprint and overall cost.

6.2.3 Roof Structure

- Roofs and structural frames to swimming pools are particularly susceptible to corrosion and fast deterioration, and high quality protective coatings are essential.

7.0 NATIONAL TRAINING CENTRE FOR CURLING

The following information is based on the construction of a purpose designed national training centre suitable for training Scotland's top curlers. The centre will ideally comprise 6 sheets (minimum of 4 sheets), and must be used exclusively for curling. Each sheet shall be 4.75m wide by a minimum of 44m long. The cost summary is based on a 6-sheet facility.

Provision must be made for changing, office and back up facilities, as well as a 300-seat spectator area. A more detailed specification and schedule of requirements are available on request.

It is important to note that good quality ice is essential, and that it must be prepared and maintained to world championship standard. Suitably qualified and experienced personnel will be required to ensure that the highest standard of ice is provided at all times.

7.1 Cost Summary

National Training Centre for Curling	2,680	m ²	£1,100	£2,948,000
Car Park and Landscaping	120	spaces	£1,000	£120,000
Total				£3,068,000

7.2 Benchmarking

There are few published figures available for Curling Centres. Recent estimates suggest that a stand-alone curling facility, similar in scale to the one proposed, can be constructed within the indicative cost given.

8.0 INDOOR VELODROME

The following information is based on the construction of an indoor velodrome to accommodate a 250m long timber banked cycling track to international standards, a 500-seat spectator area, and a flexible multi-use area in the inner track area.

The design should allow for clear unimpeded views for spectators over the track and inner track area. Provision must be made in the design for access to the inner track area by emergency vehicles, athletes and officials.

8.1 Cost Drivers

8.1.1 Clear Roof Span

- Roof span is a significant cost driver. Once beyond a clear span of 60m, each additional metre results in a disproportionate increase in the weight and cost of the roof.

8.1.2 Flexibility of Space

- A well-designed flexible space will allow a range of indoor sports such as tennis, badminton, basketball, and 5 a-side football to be accommodated in the inner track area; as well as exhibitions and other events. For safety reasons, a number of these activities cannot take place whilst the track is being used for cycling. The use of the inner track area should be maximised however with this in mind.

8.1.3 Track Design

- Since the cycling sport, the performance of the riders and the used materials (bicycle, clothing etc.) are developing constantly, the track design has to reflect such developments. This is, among other important factors, the principal reason why there are no 'off the shelf' or 'standard' track designs.

8.2 Cost Summary

Indoor Velodrome	9,671	m ²	£800	£7,736,800
Car Park/ Landscaping - participant	27	nr	1,000	£27,000
Car Park/ Landscaping - spectator	33	nr	1,000	£33,000
Total				£7,796,800

8.3 Benchmarking

There are few published figures available for velodromes. Below are the costs for the Manchester Velodrome and Wales National Velodrome for comparison, updated to August 2003 and amended to reflect a Central Scotland location factor.

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Manchester Velodrome	16,395	m ²	£930	£15,260,170
Wales National Velodrome	n/a		n/a	£7,250,000

Both velodromes accommodate a 250m track and spectator seating.

9.0 SITE ISSUES

Inevitably, a number of site issues will be scheme specific and will vary significantly from scheme to scheme. The quantum of provision required for such items cannot be adequately cross-referenced to benchmarks due to this variability. These items should be carefully considered, project by project, and it must be left with the client / design team to assess the appropriate level of provision in each case.

Such issues can affect cost both in terms of representing another heading of cost to be considered and / or through constraining the planning and design of new facilities that will have a price tag. Examples of such issues include:

Effect on site of layout and design - do site boundaries or proximity to other building on site or on neighbouring sites impose constraints on planning? Will the presence of other buildings either on site or neighbouring sites set or influence a design language, height limits and so on for any new buildings?

Town Planning, Conservation and Heritage - are form, style and massing of any proposed limited? Consider effect on level of professional fees, programme and inflation projections.

Site preparations, demolitions and remediation - will costs be incurred in preparing the site? Is land contaminated such that remediation will be required?

10.0 PROFESSIONAL FEES

In compiling their estimates, bidders will need to include allowances for fees payable to their consultant teams.

Assembling the team is an important function for the client. It is important to invest time in researching and selecting the right design team on the right terms. The type of building required and the client's preferred procurement route, or chosen means of acquiring the building, will influence appointments. On most projects, a client can expect to appoint designers (architects, structural and services engineers) and cost consultants. Depending on the complexity of the project, the client may also appoint project managers and other specialist consultants for such matters as interior design, acoustics, landscaping etc.

When appointing consultants, the client should ensure that they have the expertise and experience in similar work, can work together effectively as a team (which can prove more important than individual excellence), and that they will provide the right level of services to complete the project. Contacting professional bodies such as the Royal Incorporation of Architects in Scotland can identify potential consultants. Word-of-mouth recommendations are another good starting point – particularly from other local authorities and schools that have been involved in similar projects.

Always interview a number of prospective consultants, assess them against a range of criteria reflecting quality and not just price, and assess each on the same criteria. Also, ensure that you get to meet the individuals who will be working on your project: teams are often fielded to win jobs, which are then handled by others.

Above all do not forget that direct client input is vital to project success. Each project should have a Client Representative appointed from senior level within the client's organisation, who will act as the single point of contact. He or she does not need to be a construction expert, but will need the skills to be able to articulate the client's needs and to ensure that they are met. In order to function effectively, he or she will need a ring-fenced allocation of time, explicitly stated decision-making authority and spending limits, and clear internal and external reporting lines.

Allowances for fees will vary from project to project according to the mix of these and other variables. A typical allowance for a design team would be in the region of 13% to 15%.

11.0 CONTINGENCY ALLOWANCES AND RISK

Designing and constructing any building:

- Is a team activity – participants include external stakeholders; multi-faceted client groups, and design and construction teams.
- Is complex and difficult.
- Requires consensus, communication and joint understanding.

Design and construction is an inherently risks process. Risks may arise out of a number of categories:

- Team roles and competencies
- Management structure (including Client body)
- Clarity of objective
- Interdependencies (timely/adequate information release)
- Third party risks
- Design risks (unresolved issues)
- Price/procurement
- Programme

In order to secure best value from any project and assure the performance of that project, applicants should ensure that an overall risk management programme is in place. Typically such a programme would include a number of stages:

Identifying risks – focus on the sources of risks outlined above. Remember the distinction between risks and inevitabilities.

Risk analysis – assess risks and calculate risk allowances. Rank risks and focus on high impact, high likelihood risks.

Managing risks – there are four strategies for dealing with specific risks:

- **Avoidance** – changing or cancelling the project
- **Reduction** - designing out or limiting risks (for example, by adopting proven building technologies, commissioning full investigative surveys etc)
- **Transfer** – reallocating risks to design team, contractor or insurer. As a principle, risks should be allocated to the part most able to own that risk.
- **Acceptance** – either through fully providing for or absorbing elements of risks or reacting only if risks become a reality.

Review and feedback – monitoring; ongoing review of risk register; identification of new risks; capturing learning for future use.

In avoidance and reduction strategies, rational mitigation decisions can be made, based on an assessment of quality, cost and time implications of each risk. With transfer, the clients will usually have to pay higher fees, costs and premiums, whether the risks occur or not. With the accept and absorb

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strategy, the client should set aside a contingency fund, as part of the overall project budget, to cover the effect of risks.

Contingency allowances then should reflect only residual elements of risks dealt with by avoidance and reduction policies and risks to be provided for as a consequence of an accept and absorb policy.

Clearly the level of contingency allowance will vary from project to project as a reflection of the mix of risk management strategies to be adopted. The level will also vary through the life of a project.

For the purpose of guidance only, we expect that the typical contingency allowances will be 5% for design contingency and 5% for client contingency. Design and other risks will be mitigated, either fully or in part, as the project evolves. As this happens the design contingency can be reduced.

12.0 PROGRAMME

Construction activity has an optimum, economic sequence and pace. It is generally perceived that construction projects may be subject to constraints that adversely impact on building operations. To the extent that this may be true, a premium cost will be incurred.

Examples of such constraints might include:

- Holiday working only;
- Noise restrictions;
- Health and Safety issues arising from a working school site;
- Special security measures;
- Access limitations;
- Working area restrictions;
- Limitations to deliveries of materials
- And so on...

Requirements to impose constraints on construction activities will be site specific and will vary considerably from site to site. For this reason it is impractical to give any general guidance as to the level of provision that should be made for premium costs within capital budgets. Applicants should however carefully consider these issues when compiling budgets for proposed schemes in order that the budgets reasonably reflect the physical circumstances relating to the works.

Note. Applicants should also be mindful of the effect that procurement can have on a programme. In some cases, given the scale of some of the projects, this may require applicants to advertise the tenders for the works in the Official Journal of the European Communities (OJEC).

13.0 LOCATION FACTORS

The cost of building is affected by location, in addition to the various factors discussed elsewhere in this guidance note. Factors have been developed to quantify the effect of a number of localised variables, such as supply and demand of resources for construction (labour and materials), workload and capacity in particular markets.

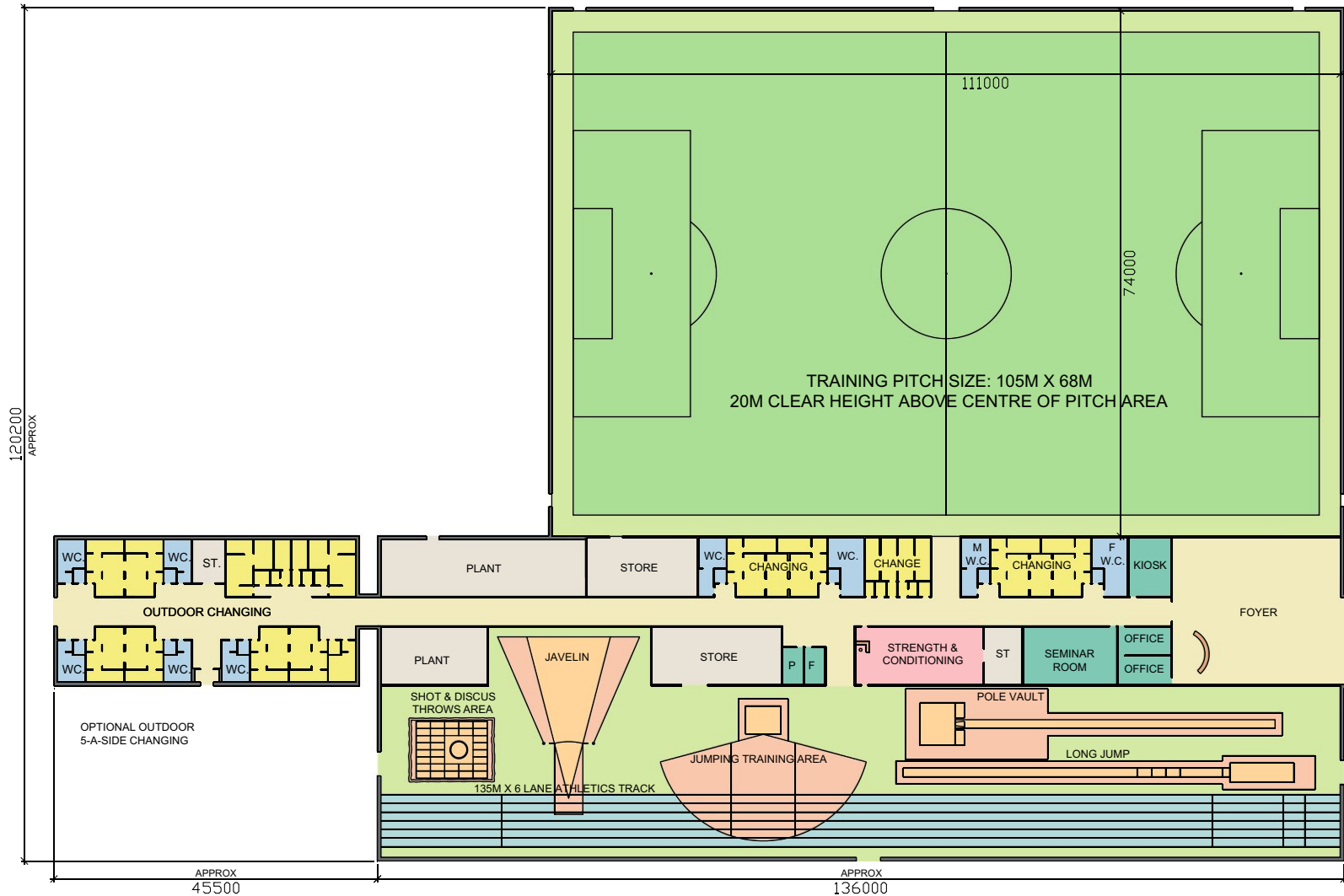
Building cost information included in this guidance note is at current, August 2003, prices adjusted for a Central Scotland location. The location factor for Central Scotland is 0.85. In order to adjust prices to reflect an alternative location, applicants should select the factor for the required location and apply that to the cost data.

While these factors provide a quick and useful means for adjusting building prices to reflect localised influences of the market in different locations, their limitations should be understood. All these factors are particular to a time and place and local conditions will vary both absolutely and relatively from time to time. The factors should not be used as a substitute for the particular local knowledge of market conditions held by local authorities and their expert advisers.

14.0 INFLATION ALLOWANCES

In order to estimate the outturn costs of proposals, applicants will need to make allowance for inflation. Typically inflation allowances are calculated by reference to indices such as those published each quarter by Building Magazine. Davis Langdon & Everest's Cost Research department writes these quarterly forecasts.

All costs given in this guidance are at August 2003 price level – Tender Price Index 424.



SCHEDULE OF AREAS:

GROUND FLOOR

SPORTS HALL	8,214 sqm
INDOOR ATHLETICS	3,451 sqm
PLANT ROOMS	288 sqm
FOYER	472 sqm
KIOSK	50 sqm
OFFICES	61 sqm
SEMINAR ROOM	107 sqm
CHANGING ROOMS	195 sqm
FIRST AID	15 sqm
PHYSIO	15 sqm
STRENGTH & CONDITIONING & STORE	191 sqm
STORE	130 sqm
CIRCULATION	569 sqm

NET AREA 14,029 sqm

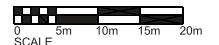
(151,457 sqft)

GROSS INTERNAL AREA 14,349 sqm

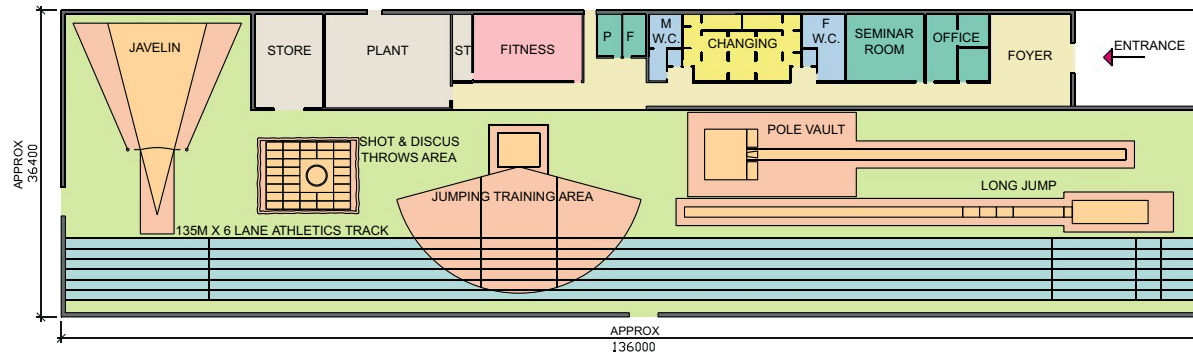
(154,457 sqft)

OUTDOOR CHANGE & CIRCULATION 845 sqm

CAR PARKING (Indicative) 50 Spaces



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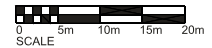


SCHEDULE OF AREAS:

ENTRANCE FOYER	104 sqm
OFFICES	60 sqm
SEMINAR ROOMS	73 sqm
CHANGING/TOILETS	184 sqm
FITNESS	101 sqm
ANCILLARY	29 sqm
STORES	107 sqm
PLANT ROOM	165 sqm
CIRCULATION SPACE	240 sqm
TRACK/GAMES AREA	3,490 sqm

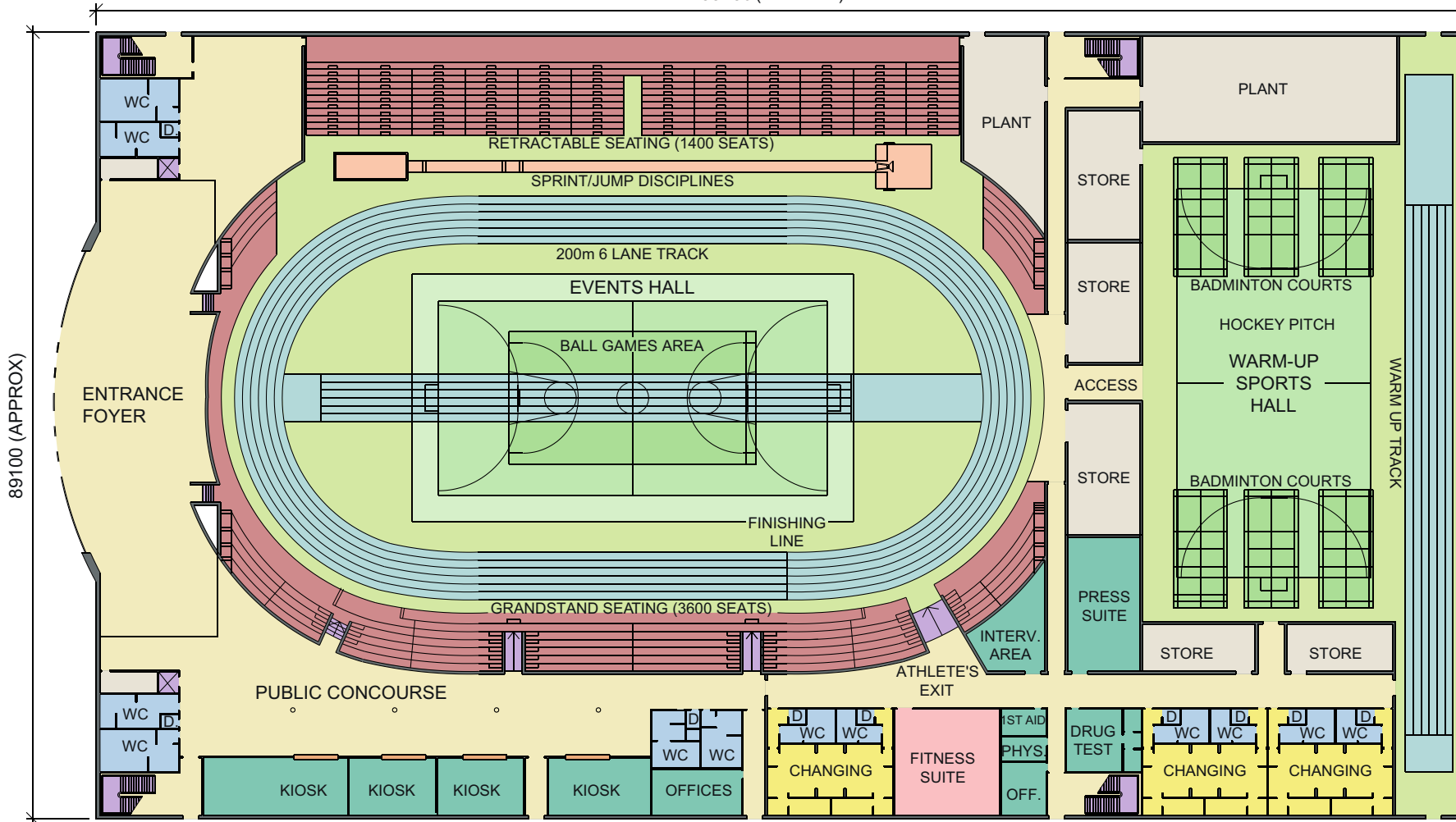
NET AREA	4,553 sqm
	(49,010 sqft)
GROSS INTERNAL AREA	4,600 sqm
	(49,515 sqft)

CAR PARKING (Indicative) 25 SPACES



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15250 (APPROX)



89100 (APPROX)

**AREAS:
FIRST FLOOR PLAN:**

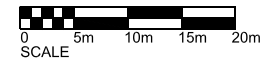
STADIA SEATING*	1,558.2 sqm
FOYER/CONCOURSE	1,727.0 sqm
CHANGING ROOMS	510.3 sqm
ADMIN OFFICES	83.9 sqm
CIRCULATION	817.5 sqm
KIOSKS	311.3 sqm
PUBLIC WC's	217.1 sqm
WARM-UP HALL	2,213.7 sqm
FITNESS SUITE	143.6 sqm
MEDICAL FACILITIES	90.4 sqm
SPORTS STORAGE	486.3 sqm
INTERVIEW / PRESS	171.9 sqm
PLANT	509.6 sqm

NET TOTAL 8,840.8 sqm
(95,165 sq ft.)

TRACK / PITCH 4,481.0 sqm
(48,235 sq ft.)

GROSS FOOTPRINT 13,979.1 sqm
(150,050 sq ft.)

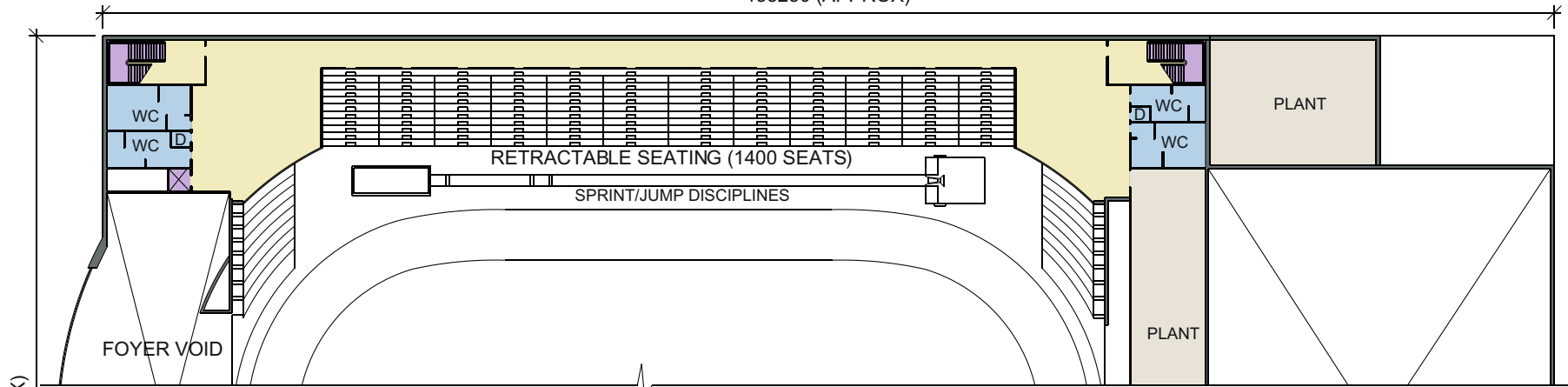
CAR PARKING (Indicative) 400 SPACES



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FIRST FLOOR PLAN

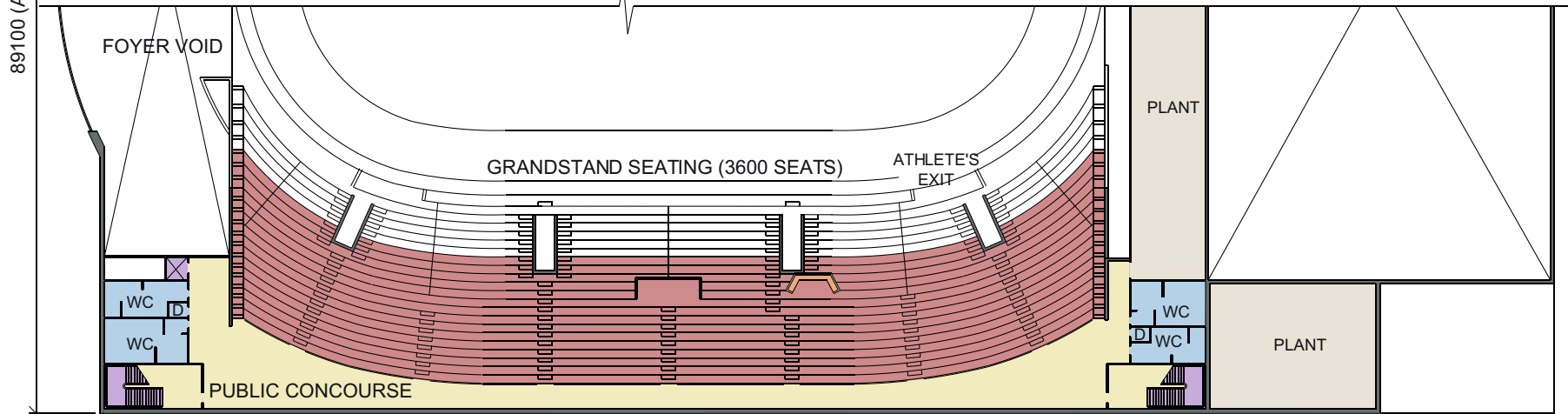
155250 (APPROX)



AREAS:
FIRST FLOOR PLAN:

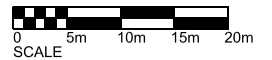
GENERAL CIRC'N	717.5 sqm
PLANT	660.8 sqm
PUBLIC WC's	148.3 sqm
NET TOTAL	1,526.6 sqm (16,435sq ft.)

89100 (APPROX)



AREAS:
SECOND FLOOR PLAN:

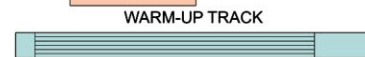
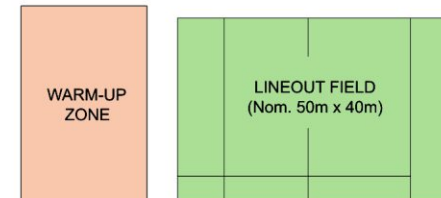
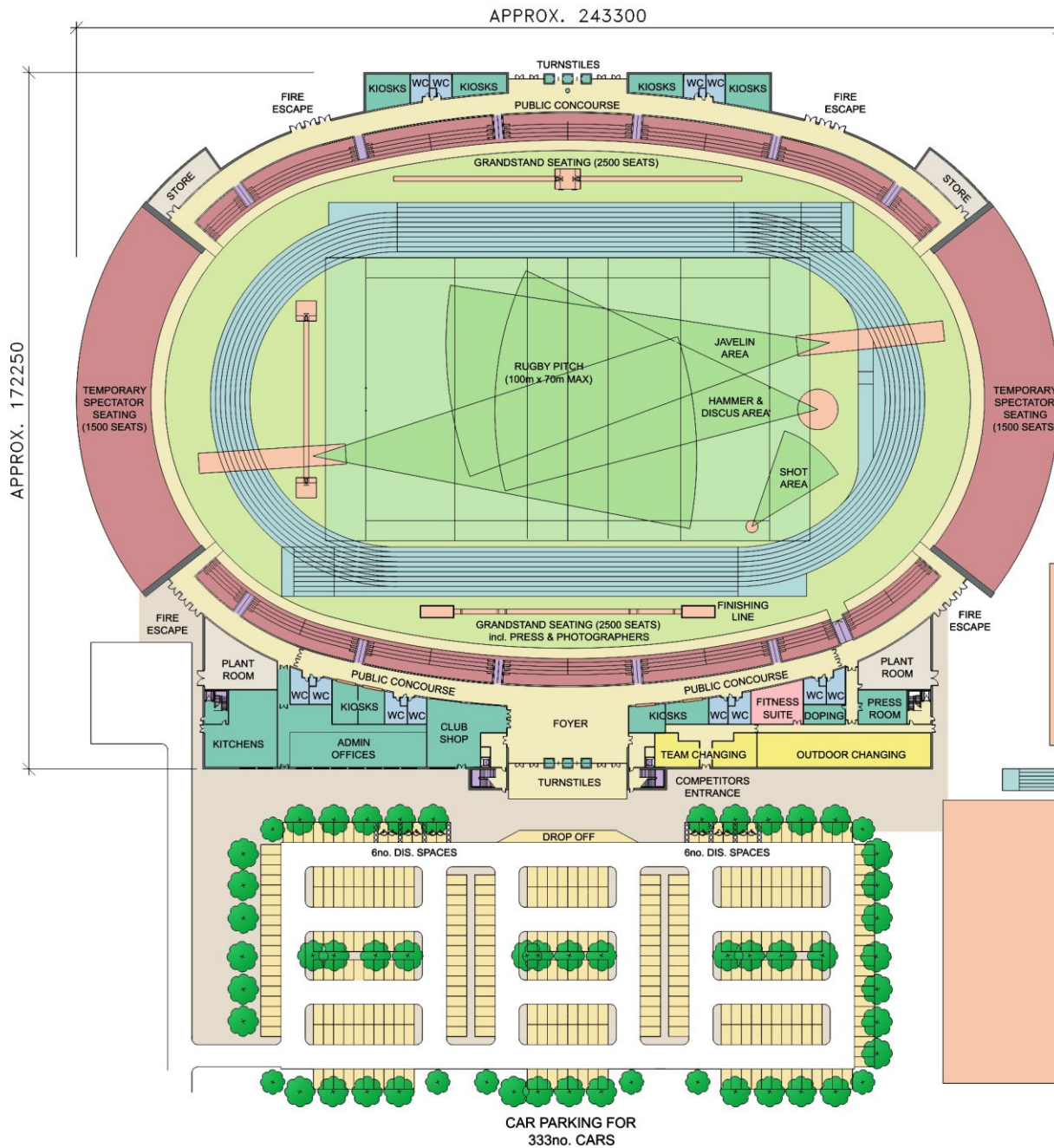
GRANDSTAND SEATS	1,330.0 sqm
GENERAL CIRC'N	600.7 sqm
PLANT	232.8 sqm
PUBLIC WC's	148.3 sqm
NET TOTAL	2,311.8 sqm (24,885sq ft.)



SECOND FLOOR PLAN

NATIONAL TRAINING AND EVENTS FACILITIES

NATIONAL INDOOR SPORTS ARENA (INDICATIVE) ~ UPPER FLOOR PLANS

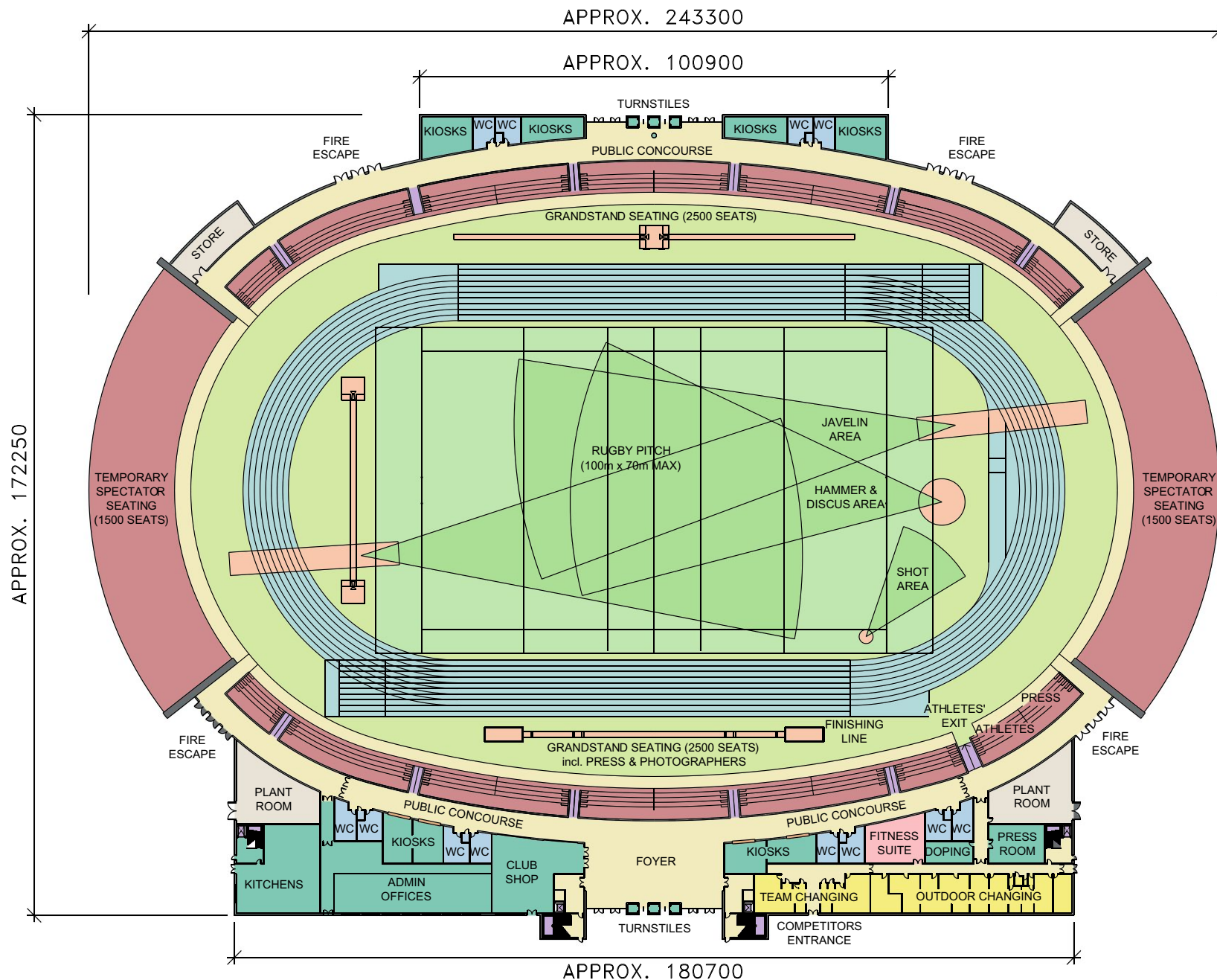


NET AREA	10,336.9 sqm
TEMP SEATING ZONE TRACK / PITCH	3,856.6 sqm
TRACK / PITCH	20,282.0 sqm
GROSS FOOTPRINT	35,134.5 sqm (378,190 sqft)
TRAINING PITCHES	21,768.8 sqm (5.38 Ac)
CAR PARKING	9,643.0 sqm (2.38 Ac)



0 10 20 30 40 50m
SCALE

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AREAS:
GROUND FLOOR PLAN:

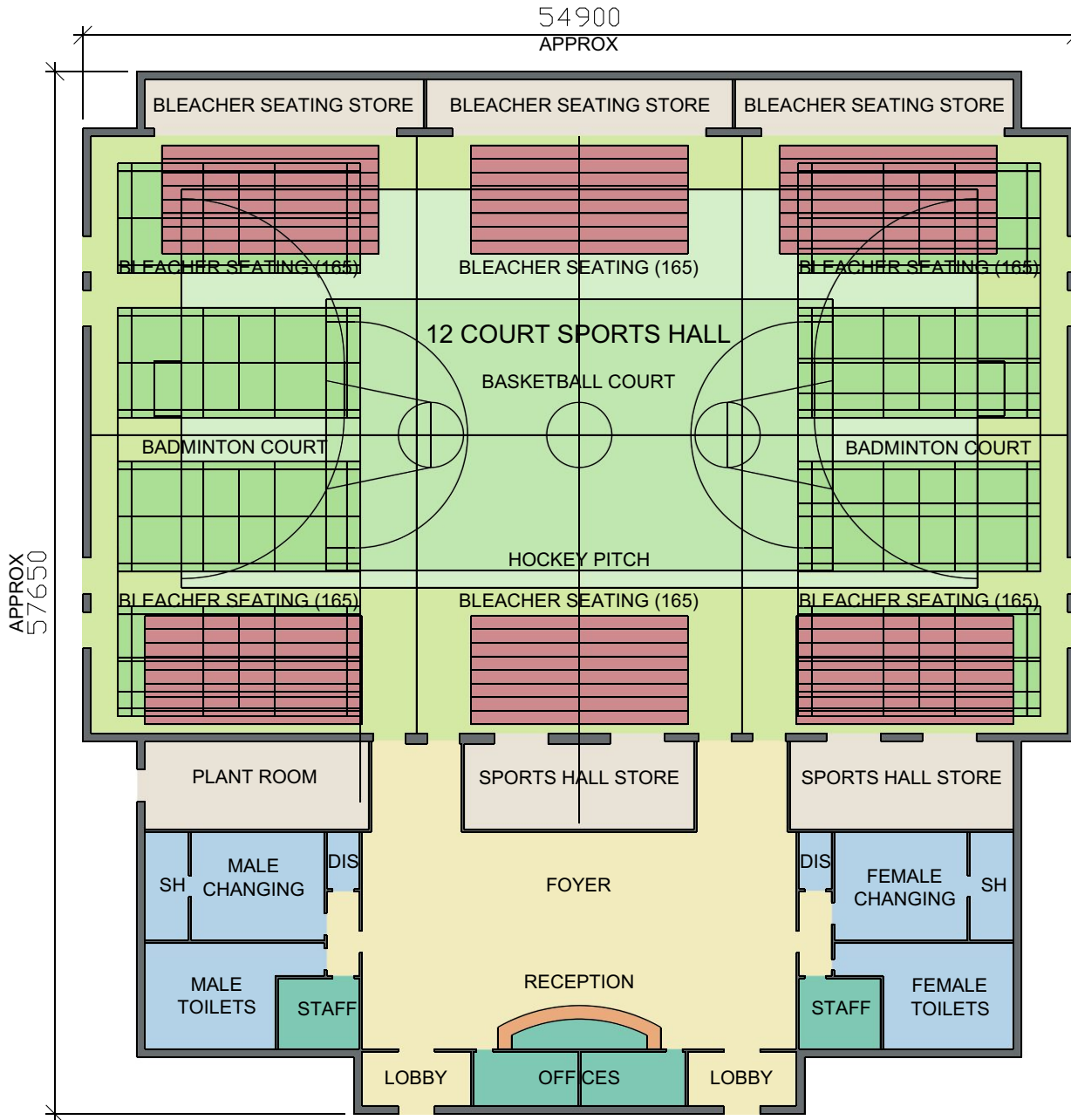
STADIA SEATING	3523.4sq m.
CONCOURSE	2432.0sq m.
CHANGING ROOMS	523.3sq m.
ADMIN OFFICES	484.3sq m.
DELIVERIES/CIRC'N	514.4sq m.
KIOSKS	557.0sq m.
PUBLIC WCs	393.0sq m.
CLUB SHOP	258.8sq m.
FOYER	425.1sq m.
INTERVIEW ROOM	100.6sq m.
STORAGE	238.6sq m.
PLANT ROOM	421.9sq m.
KITCHEN	291.3sq m.
FITNESS SUITE	122.3sq m.
DOPING ROOM	50.9sq m.
NET AREA	10336.9sq m.

TEMP SEATING ZONE	3856.6sq m.
NET AREA	10336.9sq m.
TRACK/PITCH	20282.0sq m.
GROSS FOOTPRINT	35134.5sq m.

CAR PARKING (Indicative) 400 SPACES



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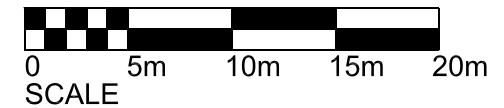


SCHEDULE OF AREAS:

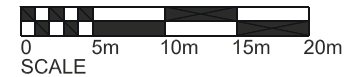
SPORTS HALL	1,782 sqm
SPORTS HALL STORES	120 sqm
BLEACHER STORE	129 sqm
PLANT ROOM	60 sqm
CHANGING ROOMS	228 sqm
STAFF ROOMS	36 sqm
PUBLIC AREAS	288 sqm
CIRCULATION	53 sqm
OFFICES	35 sqm

<u>NET AREA</u>	2,731 sqm
	(29,396 sqft)
<u>GROSS INTERNAL AREA</u>	2,846 sqm
	(31,642 sqft)

CAR PARKING (Indicative) 100 SPACES

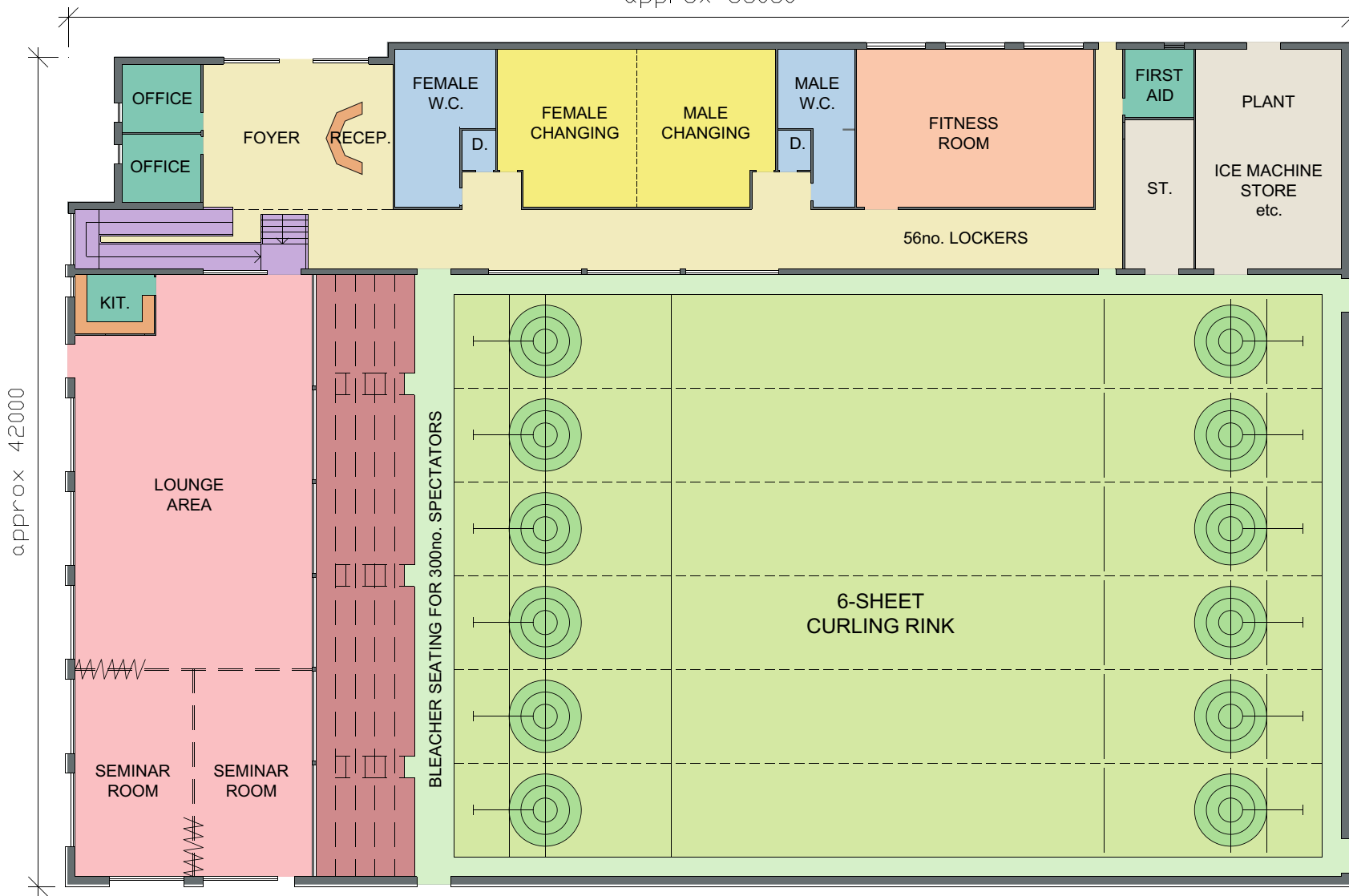


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approx 65050



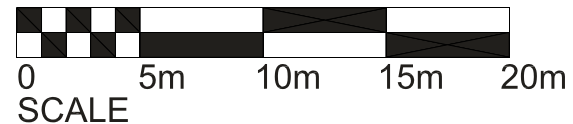
approx 42000

AREAS:

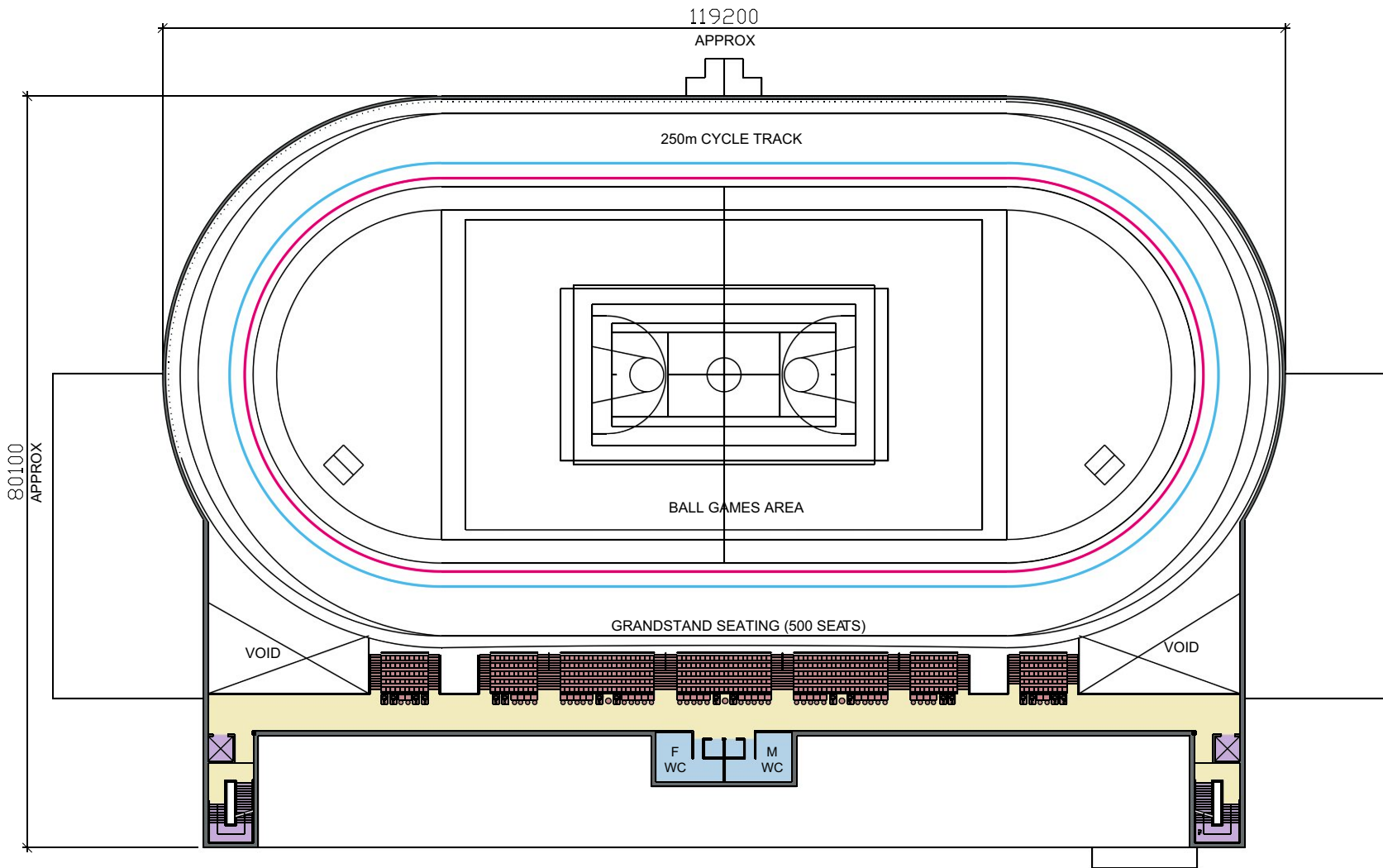
CURLING RINK	1,433.5sq m.
LOUNGE etc.	366.0sq m.
CHANGING	108.0sq m.
FEMALE W.C.	37.5sq m.
MALE W.C.	28.0sq m.
FITNESS ROOM	96.0sq m.
OFFICES	28.0sq m.
FOYER / REC'N	71.0sq m.
ANCIL. STORES etc	122.0sq m.
CIRC'N / LOCKERS	182.0sq m.

NET TOTAL	2,472.0sq m. (26,610sq ft.)
GROSS INTERNAL	2660.4sq m. (28,640sq ft.)

CAR PARKING
(Indicative) 120 SPACES



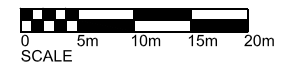
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SCHEDULE OF AREAS:

FIRST FLOOR

CIRCULATION SPACE	550 sqm
TOILETS	68 sqm
TOTAL NET AREA	618 sqm
TOTAL GROSS INTERNAL	638 sqm



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