OPEN SPACE FOR RECREATION OPTIONS ANALYSIS - FRENCHS FOREST HOSPITAL PRECINCT.

ADDENDUM NO 2 – PHASE ONE REVISED PROVISION STRATEGY

AUGUST 2021

northern beaches council

OTIUM Planning group

SPORT + LEISURE

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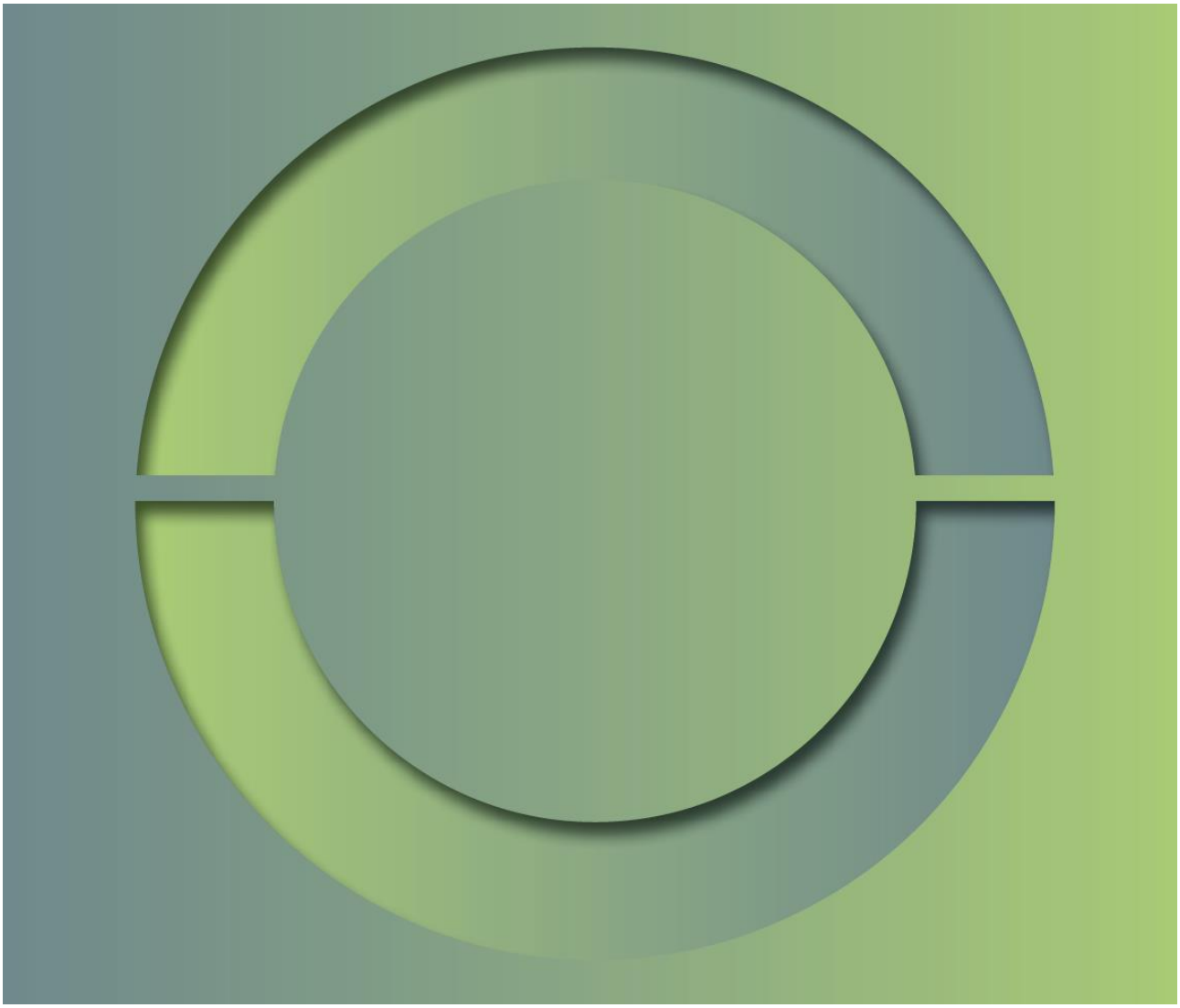

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Executive Summary

The Frenchs Forest Hospital Precinct is a planned residential growth area anchored around the new Northern Beaches Hospital that is expected to accommodate around 10,000 residents and 3,000 employees in a predominantly high-density urban precinct that will also support about 53,700 m^2 of commercial and retail space.

Phase One of this precinct involves the development around the hospital and focused on the redevelopment of the current Frenchs Forest High School, which will be relocated. Additional residential high-density development will occur on the south of Warringah Rd and North of Frenchs Forest Rd. Overall, the growth anticipated for Phase One is projected at 4,246 new residents and 2,981 employees.

Prior planning for all phases (1-3) of the precinct undertaken in 2019 developed an Open Space and Recreation Provision Strategy (Otium Planning Group).

Since the development of the provision strategy, significant changes in the preferred options has arisen. Primarily associated with the intent to redevelop Aquatic Reserve to support a new high school with shared school-community facilities and to relocate the existing baseball use to allow the development of sports fields on the site along with community park uses. New advice from Council is that a combination of site contamination and lack of relocation options for the current sporting tenant means the prior strategy is no longer viable.

Council requested an updated provision strategy for Phase One in March 2021. This Addendum to the original report represents updated advice regarding open space, sport and recreation provision for Phase One of the Frenchs Forest Hospital Precinct Development Area.

Key strategies in meeting the anticipated needs are:

1. Expand the capacity of existing sporting spaces and facilities where possible and supplement field space with built solutions.
2. Confirming the importance of providing a central park (town centre park) to service the future town centre and higher density residential adjacent.
3. Strategic expansion of some existing parks to improve capacity and accessibility.
4. Expand the extent of trail networks and improve linkages to nature-based trails from the high-density residential areas.
5. Improve active transport and walking links throughout the precinct to address barriers from high volume roads.
6. Ensure shared use of school facilities at the new high school site to provide sporting field and court space.
7. Pursue opportunities for indoor sport and recreation spaces as part of built solutions in the town centre.

The detailed provision plan is contained in Section 4.

1. Introduction and Background

In 2017 Council adopted the Northern Beaches Hospital Precinct Structure Plan (HPSP) to set the strategic land use planning framework for Frenchs Forest over the next two decades. With an expected 4,360 dwellings and 3,093 jobs, a key part of the HPSP is creating a new town centre on the grounds of the existing Frenchs Forest High School and relocation of the school to Aquatic Reserve. Development is planned to occur in three main phases.

In the same year, the NSW Department of Planning and Environment announced the area as a Priority Precinct, fast-tracking Phase one of the HPSP, which delivers the new town centre and adjacent residential development.

In September 2019, a provision plan for open space for sport and recreation was completed and recommended a provision strategy for the broader precinct, including the three development phases.

A crucial part of that strategy was the redevelopment of the current Aquatic Reserve to accommodate the relocated High School with new indoor courts and new synthetic sports fields. This strategy was contingent upon the successful relocation of the current sporting use for baseball and softball. Extensive options investigation, a draft master plan, and several site suitability issues have meant that the relocation of existing "diamond" sports is no longer a viable strategy. In addition, Site contamination and other suitability issues mean that the proposed development of the new High School Campus on the site is also unlikely.

Council has requested a review of the Phase One provision strategy to take account of this significant change:

> *The Department of Planning, Industry & Environment has identified Phase 1 of the HPSP as a Planned Precinct and are the lead agency in the rezoning investigations. Rezoning of Phase 1 will occur in 2021.*
>
> *Council has identified that the rezoning of Phases 2 and 3 is dependent on a commitment from the State Government to fund traffic and transport infrastructure, including an east-west bus rapid transit route and the Beaches Link Tunnel.*
>
> *Additionally, Council will now only prepare a contributions plan to fund local infrastructure required by Phase 1 of the HPSP. The draft contributions plan will be reviewed by the Independent Pricing and Regulatory Tribunal to confirm it is reasonable and appropriate in the circumstances.*

Phase 1 of the development is centred around the Northern Beaches Hospital Development and the redevelopment of the current Frenchs Forest High School.

This Addendum to the 2019 Report has been prepared to address the changed circumstances, which mean the original strategy is no longer valid. The revised provision strategy is for Phase One only and will support the preparation of new Contributions Plans for the required open space, sport and recreation infrastructure.

1.1 Prior planning and need for a revised strategy for Phase 1

Otium Planning Group prepared the Open Space and Recreation analysis for the HPSP which was finalised in September 2019. The executive summary for that report stated:

Overall, no large land acquisitions for sport are recommended. Additional land to complement two existing parks is recommended, and retention of the existing oval and bushland at Frenchs Forest primary school is proposed as part of planning for Phase 3.
The focus of the provision strategy is to enhance existing assets and invest in upgrading capacity.

A significant advantage of the precinct is the proximity to large reserves of bush and nature-based recreation opportunities (Manly Dam, Forestville Park- and Garrigal National Park) and the ability to increase linkages to and the supply of trail and path-based recreation opportunities within these existing reserves.

A key disadvantage is the planned high-density residential development around the town centre and hospital precinct and the lack of additional open space to serve these residents. Maximising multi-use public space and the proposed Town Centre Parklands is part of the response. A further critical strategy is the extensive active transport network

(bicycle and pedestrian paths) proposed to link residents and visitors to the multiple natural areas reserves south of Warringah Road and expanded capacity at existing parklands to the north of Frenchs Forest Rd.

The proposed provision strategy identifies additional land needs of around 1.24 Ha to expand two existing parks and provide a new "central" park in Phase 3. This is in addition to the proposed 1.49 Ha of public open space in the future Town Centre. In addition, around 6,500 m² in floor space is required to accommodate sport and recreation facilities.

1.1.1 Recommended provision linked to Phase One

While the 2019 study and update (04.09.19) provided a strategy for all three phases of development, **the focus of this Addendum is for Phase One only**. The following recommendations from the 2019 study can be linked to demand emerging from Phase One development. However, several of these would also address some of the need arising from Phases Two and Three.

Those that are no longer possible are shown in red.

Sport Space and Indoor Program Space Provision

- Reconfigure and upgrade Aquatic Reserve to provide two public rectangular synthetic fields with an oval overlay across two adjacent fields. This will be supplemented with community access to a third synthetic school field.
- 1 x Outdoor multi-use court provided in or near the town centre (Phase 1).
- 3 new indoor courts as part of the High school campus in Aquatic Reserve, which will be available for community use out of school hours.
- Additional indoor program and fitness space at WAC (minimum 1,500m²)
- Allocation of around 2,000 m² –for indoor sport courts as part of sport and fitness centre in the town centre as part of the proposed community hub
- An allocation of indoor program, recreation and fitness space of 2,000 m² in the Town Centre Community Hub

Parks and Outdoor Recreation

1. *Implement Brickpit Reserve Master Plan and continue to enhance bikeway/trail links to reserves to the south*
2. *Implement Rabbett Reserve master plan and acquisition of additional land of 730m².*
3. *Secure additional land (approx. 1600m²) for Akora Reserve to expand and link towards Warringah Rd. provide active recreation elements such as half-court.*
4. *Ensure proposed Town Centre parkland includes a minimum 60x 40 m area for informal sport and activity*
5. *Town centre parklands to host at least 2 large play nodes for very young and young children*
6. *Older children's play and active recreation opportunities to be provided in Akora, Brickpit and Rabett reserves.*
7. *Additional elements for the redevelopment of Aquatic reserve to include running trail (multi-use walking, running circuit with basic surfacing) and exercise equipment*
8. *Youth spaces provided at Brickpit Reserve, Akora Reserve, proposed parklands in Phase 3 and Aquatic Reserve. Additional Youth active recreation provided via additional MTB trails network and additional links. Provide a Large destination youth precinct at Lionel Watts Reserve*
9. *Expand trail and path networks, linkage paths and formalise trail use of pipeline and power easements*
10. *Provide additional off-leash and on-leash Dog Exercise Areas, including at least one off-leash area specifically for small dogs (within 800m of the town centre).*
11. *Maximise opportunities for mixed-use open space / public space in the town centre and other higher density areas. Consider shade/ canopy and minimum vegetation cover standards to mitigate urban heat loads.*

1.2 Study area

Legend

B1 Neighbourhood Centre	R2+ Low Density Residential plus additional land uses	R3+ Medium Density Residential plus additional land uses
B4 Mixed Use	R3 Medium Density Residential	SP2 Infrastructure
Phase 1 (Immediately)	Phase 2 (10 years)	Phase 3 (10 years +)
Proposed new road		

Figure 1 – Phase One of the HPSP

Figure 2 – Draft Urban Design for Phase One (CHROFI 2019)

2. Phase One - Population Growth and Demand

2.1 Projected population

Council adopted the Frenchs Forest Hospital Precinct Structure Plan (HPSP) on 1 August 2017. The HPSP would deliver 4,360 dwellings and 53,731sqm of non-residential floor space as follows:

Table 1 – Projected Population

	Dwellings	Population	Non-Residential GFA (sqm)	Workers
Phase 1	**1,930**	**4,246**	**47,731**	**2,981**
Phase 2	1,115	2,453	-	-
Phase 3	1,315	2,893	6,000	112
Total	**4,360**	**9,592**	**53,731**	**3,093**

2.2 Demand for Open Space, Sport and Recreation

Demand was assessed in the prior report using multiple data sources. One of these was Otium Planning's Demand Analysis Model. The model was run for the overall total population of the three phases. The outputs of the model were combined with other analysis such as comparative assessment, review of existing planning for the precinct, spatial and access considerations and demographic issues. The report did not replicate nor try to "second guess" the work undertaken in the existing prior planning studies undertaken for the HPSP. However, the demand analysis model has been used to add additional consideration to planning the future provision of Open Space for Recreation.

The Demand projection for Phase 1 has considered both open space for general park use and land/ facilities needed for formal sporting activity.

2.2.1 Demand Analysis Model

The Demand Analysis Model has been developed using a complex set of data sources and modelled capacity. In simple terms, the model uses the following information:

- Sport and Recreation Participation Data for NSW or for Northern Beaches LGA (if available). The key source is the Ausplay data set which is updated four times a year, and as data sets reach confidence thresholds, new reporting is provided. This forms the basis for projections based on population growth.
- Assessments of the capacity of sporting facilities to accommodate use.
- Projections of the use hours needed to accommodate demand.
- Available participation data for non-sport active recreation

The model is calibrated for each LGA and provides a Demand Profile for each sport or activity. Using the capacity and other assumptions, the model can be converted to a projected need for different facilities or active recreation opportunities.

The model has the following limitations:

- Longer-term projections are increasingly uncertain when broken down by specific sport due to shifting participation trends. However, aggregated demand (such as for "sporting fields") is reasonably robust as shifts between codes are less relevant when aggregated.
- Detailed projection of recreation activities such as picnicking, nature appreciation etc., are not possible with the available data.
- Facility and spatial demand is based on model outcomes and assumptions of the ability of a facility to be used at capacity. Some allowance is built-in for the less than perfect nature of park and sporting field provision, but future projections can only be based on the assumption that future supply is fit for purpose and functional.
- Some activities have low participation, and confidence in participation rates for state, region or LGA can vary.

Simply, this means that modelling demand uses the available participation data to determine how many facilities are required to meet the annual demand generated by that participation. The model also uses spatial variables to identify the amount of land needed to accommodate the facilities and ancillary space required to meet this demand.

The basics of the Demand Analysis Model are shown below:

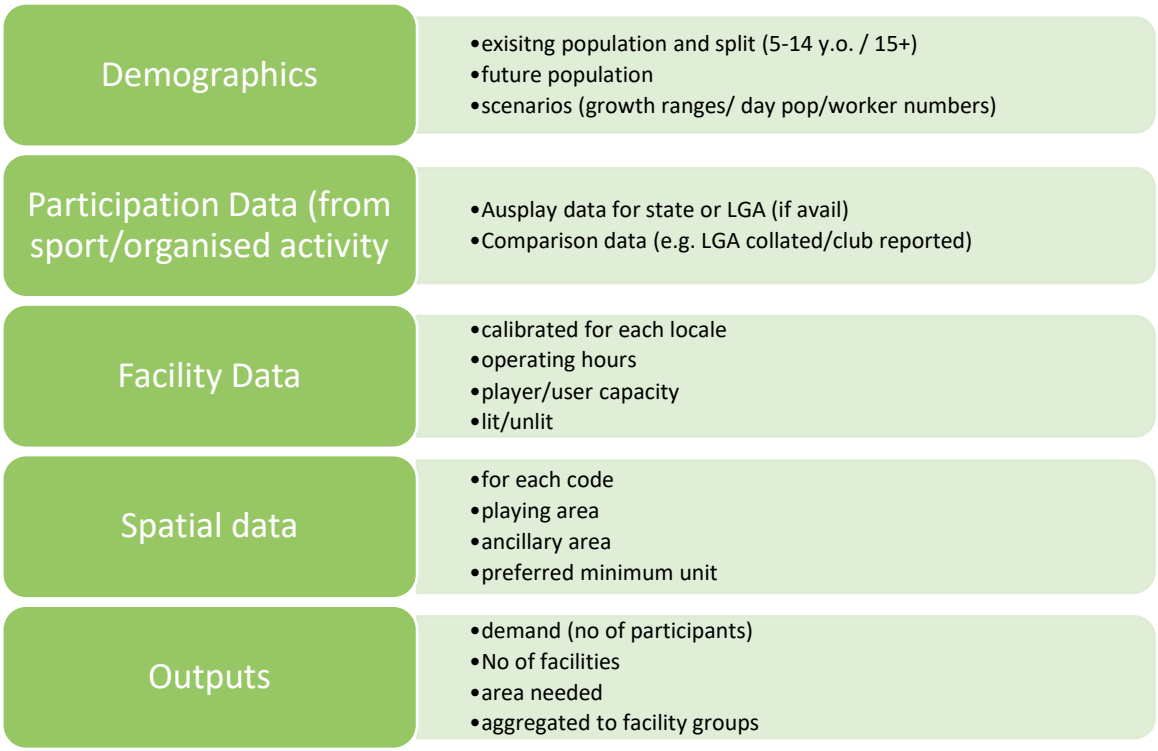

Figure 3 - Overview of the Demand Analysis Model

2.2.2 Ausplay Overview

An overview of the latest Ausplay data is provided below with comparisons across age cohorts and between NSW and the Northern Beaches LGA. **In general, the Ausplay data indicates that adults and children in Northern Beaches are more likely to participate in active recreation than the state average.**
The current participation data updates have been used to update projected demand for Phase One.

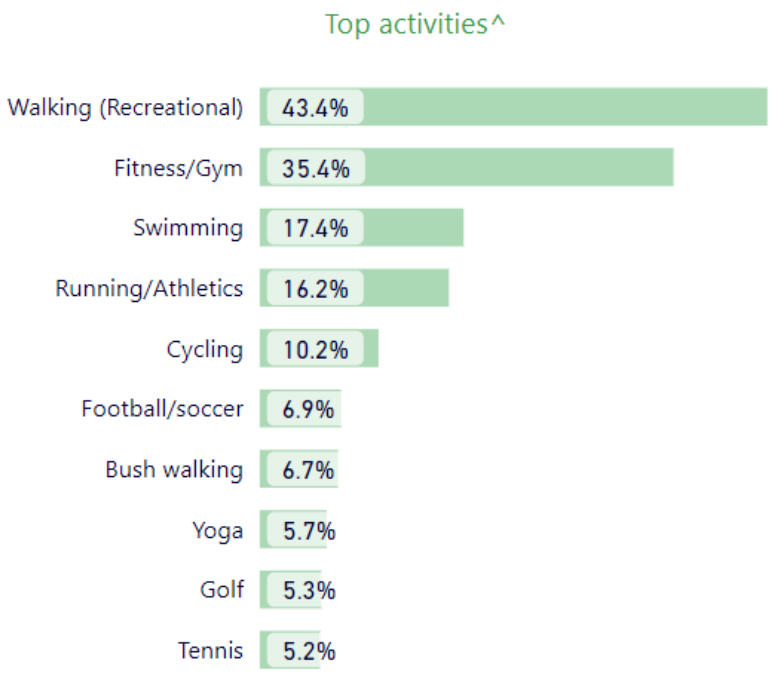

Figure 4 - Top activities for Adults (15+) in NSW (Ausplay May 2021)

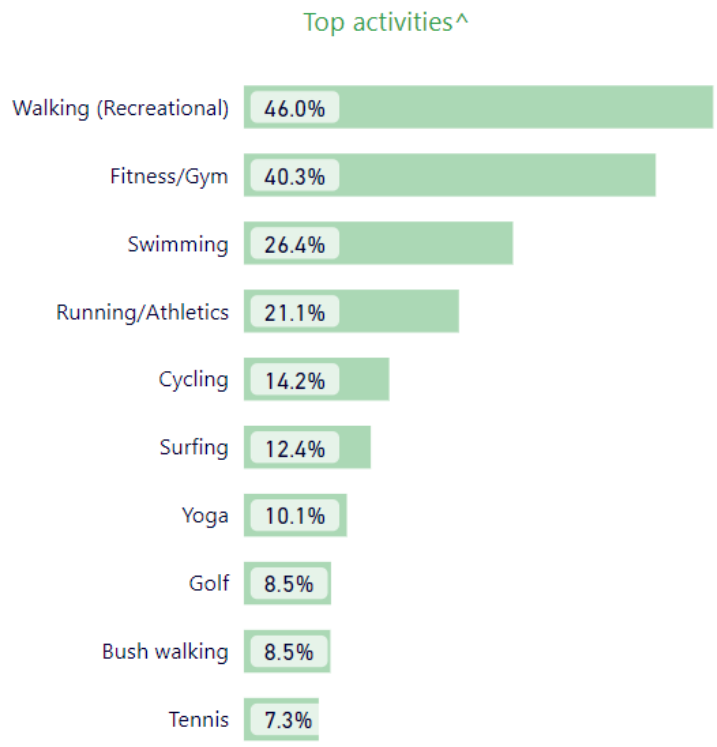

Figure 5 - Top Activities for Adults in Northern Beaches LGA (Ausplay May 2021)

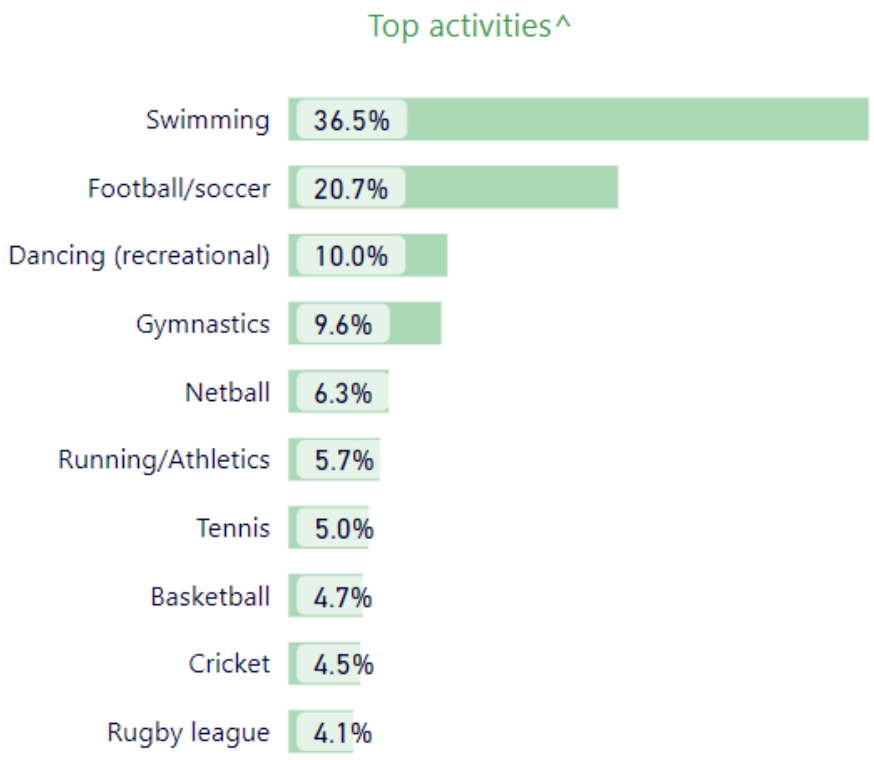

Figure 6 - Top Activities for Children (0-14) in NSW

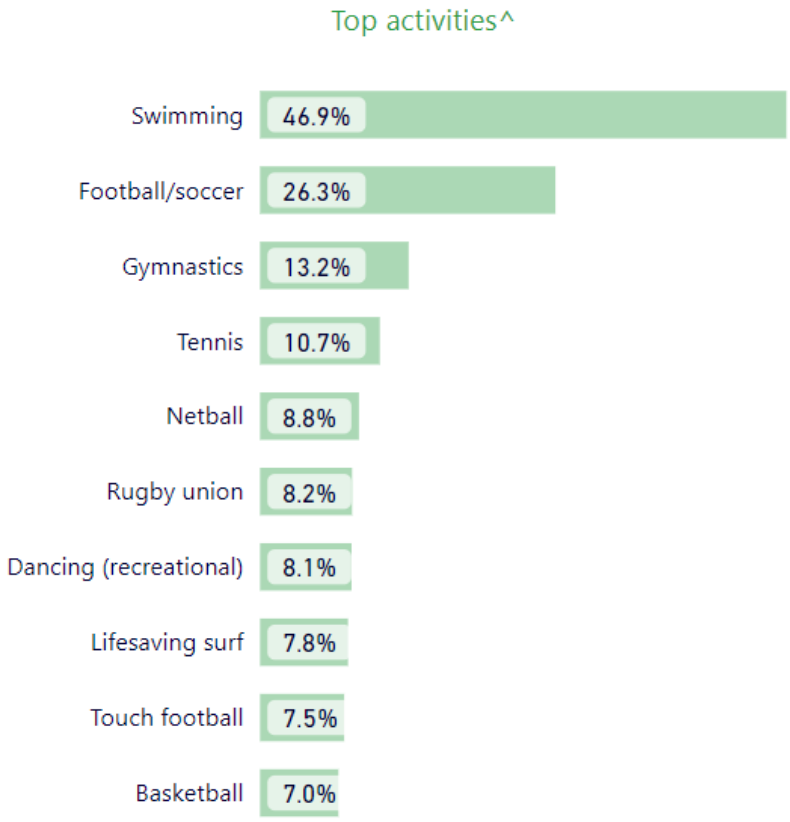

Figure 7 - Top activities for Children in Northern Beaches LGA

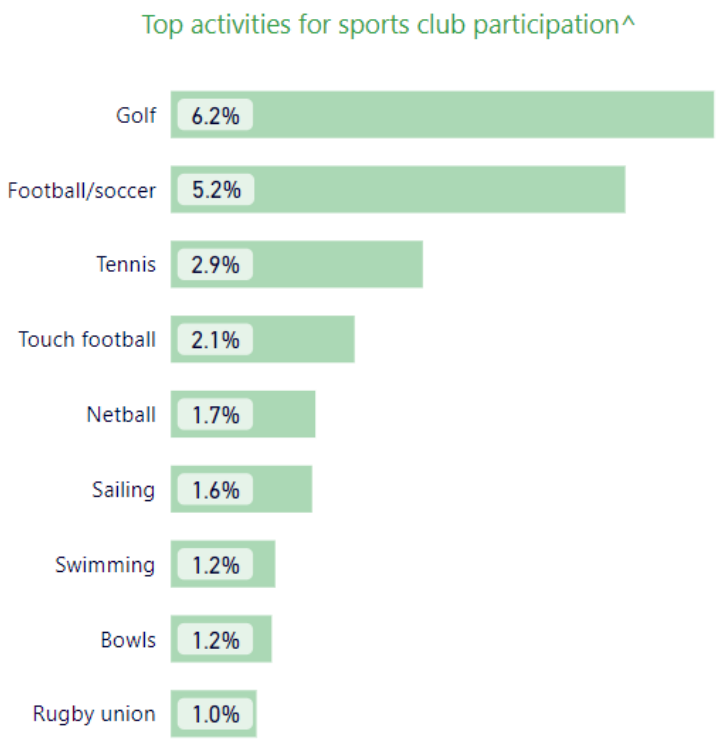

Figure 8 - Top organised sport participation for adults (15+) in Northern Beaches LGA

Figure 9 – Top Sporting club participation for 0-14 y.o. in Northern Beaches LGA

2.2.3 Assessing Open Space and Sporting Needs

Phase One will generate additional demand from 4246 new residents and an estimated 2,981 day population (workers).
Demand from the day population for formal sporting facilities has been discounted to 10% of resident demand[1]. Therefore, the demand model assumes a population of 4246 + 298 (2981 x 10%) = 4544. Projected demand is distributed between 5-14 (children) and 15+ (adults) using the current split estimates of around 13.5% for children and 80.1% for adults. Participation numbers differ significantly for child and adult populations, and the demand analysis model uses the Ausplay data for the respective populations to generate an aggregate participant number.

Based on updated participation data, the Demand Analysis model indicates:

Table 2 - Demand Analysis Model Outputs- Sport (using Ausplay data for NSW and Northern Beaches LGA-accessed May 2021)

Facility Grouping	Demand (participants) based on NSW data	Demand (participants) based on LGA data	Likely demand in facilities	Min. Spatial demand implications
Oval sport (cricket AFL and athletics)	229	138	Additional capacity required of 0.5-1 new oval An additional 6 field hours in winter and 15 hours in summer	1.25 Ha- 50% of playing area required
Rectangle (RU, RL, Football, Touch etc)	580	448	Additional capacity of 1 full high capacity field with lights (with highest demand from Football). Field will need capacity for more than 32 hrs/week in winter. Alternate provision would require 2 grass fields.	2.1 Ha- To provide a multi-use playing area and ancillary space for amenities, circulation and parking.
Outdoor courts (netball and tennis)	339	286	Additional demand for 1-2 tennis courts and 1 netball court.	4500 m2 required for 3 courts and ancillary space
Indoor courts (basketball, netball, badminton, volleyball, futsal etc)	320	218	Demand for 1 additional indoor court.	1000 m2 of indoor sport space.
Other Indoor (martial arts, gymnastics, yoga, dance etc)	1617	1077	Demand for approx. 1300 m2 of indoor program space	1300 m2 indoor program space
Pool/swimming	924	1249	Demand for an additional Pool capacity of around 1200 new users participating weekly.- will be met	Nil- capacity within existing Aquatic Centre after upgrade

[1] Based on suggested discount rates contained in the Draft Greener Places Design Guide (GANSW 2020).

Facility Grouping	Demand (participants) based on NSW data	Demand (participants) based on LGA data	Likely demand in facilities	Min. Spatial demand implications
			with planned upgrade.	
Speciality outdoor (bowls, hockey, baseball etc)	127	83	No new facility indicated- demand not sufficient to trigger new.	Nil
TOTAL			**0.5-1 Oval field 1 lit high capacity rectangular field 2 tennis courts 1 netball court 1 new indoor sports court 1-3 new indoor program spaces at approx. 500m2 ea**	**3.8 Ha for fields and outdoor courts 2300m2 of indoor sport and indoor program floor area**

Assumptions:

1. Sport fields assumed to be high quality natural turf and accommodate around 27 hours per week of use in summer and 20 hrs/week in winter if unlit.
2. Normal modelling will assume threshold demand for a new facility at around 20%. This means that unless existing facilities are known to have latent capacity, demand exceeding 20% of a new facility will most likely trigger a new facility. However, for some sports which are highly mobile in participation, demand can be dispersed across a number of facilities in a larger catchment (providing they are not at capacity) and they are accessible. For indoor sport and recreation (excluding court sport) use of spaces tend to be flexible and responsive to program demand and venue management preferences.
3. Facility and spatial needs are based on assumptions regarding the capacity of fields, courts or facilities to accommodate a set amount of use per week. Modelled capacity may be higher than real life due to assumptions of quality and capacity of facilities. Spatial demand is based on the actual playing surface required and an additional loading for ancillary space for circulation, buffers and amenities etc. this ratio is based on analysis of multiple real-life examples for the playing surface to ancillary space relationship.

The 2017 Sportsground Strategy identified a rate of 1 Ha/ 1000 as a desirable rate of supply for sporting land. This would suggest that for Phase One of the HPSP around 4.5 Ha is required. The projections using the Demand Analysis Model generates a slightly lower amount at 3.8 Ha.

Demand for Gym and Fitness Space

Commercial offerings and the private sector normally address gym and Fitness opportunities. However, it is a growing trend for public indoor sport and aquatic facilities to provide for indoor gym/fitness as part of an integrated offering that improves financial viability. It is worth understanding the level of demand likely to arise from this market sector. Key observations are:

- For Northern Beaches LGA current participation data indicates 40.3% of adults (15+) will use gym/ fitness facilities. Use of these has been volatile since covid-19 related shutdowns. However, a general trend across populations is for increasing use of gym/fitness across a large section of adult age groups.
- Self-directed use appears to be growing, as does program participation in fitness and wellness activities offered at these centres.
- Use of gym/fitness facilities may be higher for workers who will take advantage of options to exercise or attend programs around the workday (before/after work or during lunch).
- The impact of work from home trends is unknown for this precinct. However, as the main employment is health and education related, the effect may be minimal.

Based on current participation rates, the growth in population may give rise to the following demand:

- An additional resident population of 4264- indicates an additional 1,718 participants who will visit gym/ fitness facilities once or more per week.
- An additional worker population of 2981 could generate 1201 participants who may use a facility once or more per week. However, this demand could be discounted as a proportion of these may use facilities near their residence or elsewhere. A 50% discount to recognise this dispersal of demand, suggests around 600 users.
- Overall the demand from the combined populations would indicate around 2300 additional participants. This level of demand is sufficient to support additional provision in the market.

While developing a stand-alone gym/fitness offering as a public provision is not recommended, it should be considered a potential inclusion in expanding existing facilities or any proposed plans for new indoor multi-purpose sport and recreation centres. Allowing around 1000- 1500 m2 would accommodate group fitness and gym facilities as part of an overall complex.

2.2.4 Other Open Space and Recreation Needs

Identifying the general recreation/ informal open space demand generated from population growth in Phase One relies on a number of approaches. Relevant demand areas include:

1. Demand from active recreation participation, which traditionally uses public open space and active transport/ trail networks.
2. Demand for general parkland providing play, picnic, kick about space, quiet reflection, connection with nature, socialising etc.
3. Demand for specific features such as youth spaces (e.g. skate [parks and multi-use courts); Dog off-leash areas; fitness stations or outdoor gym equipment.
4. Lunchtime demand for open space, social sport or exercise space arising from workers (and demand from before and after work activities)

Active Recreation Demand using Ausplay Data

Active recreation demand for open space or path based activities (relevant to Frenchs Forest HPSP has been estimated using Ausplay participation Data for the Northern beaches LGA where available and where not, the figure for NSW has been used. The projected active recreation demand is shown below:

Table 3 – Active Recreation Demand for Adults (using Ausplay 2021)

Activity	LGA or NSW Participation rate	Projected participants [2]	Implications for provision
Walking and Bushwalking	54.5%	2639	Need for new active transport connections to residential areas to provide walking opportunities in open space areas and nearby natural areas.
Running/ Jogging -[3]	20.6%	997	Safe running loops using bikeways, around large open space areas and on trails.
Cycling	14.2%	688	Demand for bikeways and connections to workplaces and residential areas.
MTB	1.3%	63	Additional capacity on local MTB tracks

[2] Calculated using adult resident population and 10% of worker.

[3] Ausplay top ten data includes running jogging and athletics at 21.1% this has been reduced by 0.5% to remove the proportion indicated as club based athletics use.

The current trends on the frequency of participation indicate that activities such as walking, running and cycling have increased in frequency as well as participation. The new 2021 data sets for this are being finalised so the following is based on the prior data set from Ausplay (2019).

Walking:

- An additional 485 people walking for exercise or leisure per day
- 769 people walking at least 5 times week
- 1221 people walking at least 3 / week

Cycling:

- 426 riders at least 1/ week (for exercise or leisure- not commuting)
- 206 riders 5 or more times per week
- 130 riding everyday

Running/jogging:

- 188 people running every day
- 298 at least 5 / week
- 619 running at least 1/week

MTB

- Around 39 people riding at least weekly

Parkland Needs and Demand for Specific Features

The existing planning for the precinct and the previous Open Space Provision Strategy (2019 study and update 04.09.19) identified the following recommendations to meet parkland for general recreation needs associated with Phase One:

- Upgrading existing parks (Brickpit Reserve; Rabbett Reserve; Akora Reserve)
- Additional land to be acquired to increase the size of Akora and Rabbett reserves
- The proposed town centre parklands and bushland open space (1.49 Ha including the multi-use court)
- Youth space provision in Akora and Brickpit reserves
- New play nodes in the town centre parklands and enhanced play provision for older children in the reserves to be upgraded
- Additional informal activity and exercise opportunities in Aquatic reserve
- Additional trail and path development
- Dog off-leash area within 800m safe walking from the town centre

Demand for new parkland can be assessed using a range of methods. Prior planning considered both a standards approach (ha/1000) and an assessment of access/ walkability. Old planning standards in NSW have used 2.83 Ha/ 1000 for public open space.

The emerging approach promoted by the draft Greener Places Design Guide uses a combination of Recreation Opportunity Outcomes and Performance Criteria including spatial outcomes required to ensure that provision is fit for purpose and has sufficient capacity for the current and proposed population.

Work undertaken for the Northern Beaches Social Infrastructure Plan identified the following benchmarks for specific open space related recreation outcomes in normal density urban areas:

- Urban Parks 1.5 Ha/1000
- Sporting Parks 1 Ha/ 1000
- Tennis Courts 1 per 3000
- Netball courts 1 per 7500
- Youth spaces 1 per 1500
- Indoor sport 1 per 20,000
- Indoor Program Space 100m2 per 1000
- Playspaces 1 per 1300

Lunchtime/ Daytime Demand

The daytime population of employees or visitors to the precinct will also generate demand for informal open space (parkland) and active recreation (spaces to exercise or participate in social sport). Based on an anticipated daytime population in Phase 1 of 2981, the following needs are likely:

- Self-directed exercise and fitness before, after work or at lunchtimes
- Use of indoor and outdoor courts for active recreation or social sport
- Use of indoor and aquatic program spaces for [participation in fitness and exercise programs
- Public open space facilities for lunch and walking etc., during the workday.
- Public open space areas for socialising before, during or after work.

While demand for the daytime population is discounted to 10% of the demand from the resident population when used in the Demand Analysis Model (which focuses on formal sport), it is worth considering the likely additional use pressure created for public open space and the informal active recreation facilities or spaces.

If a minimum space of 10m2 per person is used for a rough projection of spatial demand and around 25% of the population will take a break to go outside during lunch, then peak demand could be inferred as:

- 25% of 2891 = 722.5
- **Area needed to accommodate open space demand from workers = 0.72 Ha**

A 10m2 area is seen as a reasonable space, especially if the recommended "covid" safety buffer of 1.5 - 2 m is considered. A 1.5m buffer requires an area of 7 m^2 and a 2 m buffer needs 12.5m^2.

2.2.5 Greener Places Design Guide

The Draft Greener Places Design Guide was released in 2020 (DPIE- GANSW). It proposes an approach that plans around the recreation opportunity outcomes desirable for the subject population and frames provision planning with a set of performance criteria that cover access, spatial needs, supporting infrastructure, and measuring the capacity of existing infrastructure.
As part of the planning guidance, the minimum open space area to support an "activation" (meaning an activity element) is defined. This minimum area is not the minimum size of the park needed; rather it represents the area of useable space required to locate one of the features. For example, a local play element for very young children should be larger than 50m2

If the minimum areas needed for each activation are considered along with the recommended rate of provision, some spatial demand can be indicated for the active element and the "host space" to support it..

If the Recreation Opportunity Outcomes are simplified and an adapted version considered for this study, the needs projected for the study area as a high-density precinct are:

Table 4 – Modelling Local Demand Using adapted Greener Places Approach

Recreation Opportunity	Distance to Access safe walking	Inferred Rate of provision	Min area for activation – m2	Min area of Public Open Space to "host" activation - Ha	Number required	Area required Ha
Local Play spaces for young and very young children	200 m	1: 1000	100	1500	4.5	0.68
Play space for older children	200-400 m	1:1500	1000	5000	3	1.1
Youth Recreation	800 m- 1200 m	1:3000	2000	5000	1.5	0.76
Local Recreation space	800m	1:1000	5000	5000	4.5	0.68
Active Recreation Space	800-1200m	1:3000	2500	10000	1.5	1.5
Fitness and exercise	800m	1:3000	1000	5000	1.5	0.76
Dog Exercise	800-1200 m	1: 5000	400	5000	0.9	0.45

Recreation Opportunity	Distance to Access safe walking	Inferred Rate of provision	Min area for activation – m2	Min area of Public Open Space to "host" activation - Ha	Number required	Area required Ha
TOTAL AREA OF PUBLIC OPEN SPACE LOCAL PROVISION						5.3 Ha of activated POS within a Pos network of 7.7 Ha

A population of 4544 has been used in the above table (projected resident population of 4246 and 10% of day population 2891). Based on the above outcomes, this would equate to between 1.2- 1.7 Ha/ 1000- depending on the actual size and location of any parks proposed.

2.2.6 Summary of Projected Demand

Based on the multiple approaches to assessing demand from the population growth associated with Phase 1, the following summary provides an overview of the recomended provision needed.

Type of Demand	Provision Recommended	Comment
Sporting Space	3.8 Ha- 4.5 Ha for fields and outdoor courts. 2300m2 of indoor sport and indoor program floor area	Based on demand using current participation data. Sportsground Strategy and Northern Beaches Social Infrastructure Plan suggest 1 Ha/1000 (4.5Ha).
Parkland/ Open space for Recreation	6.8 Ha - 7.7 Ha of parkland Including around 0.72 Ha for daytime population of workers.	Northern Beaches Social Infrastructure Plan suggests 1.5 ha/1000 for urban parkland. (6.8 Ha). Projections using Greener Places 7.7Ha.

3. Current Provision and Capacity to Accommodate Growth

This section summarises the findings of the prior report.

3.1 Available Capacity to meet Future Demand for Sporting Facilities.

Sporting facilities service district and city-wide catchments and provision at local levels (e.g. within the HPSP Precinct) should consider nearby resources. The prior study found the existing supply included:

- Warringah Aquatic Centre
- Aquatic Reserve Sports Fields (developed as a regional Baseball complex)
- 2 x school ovals in Frenchs Forest (1 of these will be lost in Phase One)
- 4 x school outdoor courts in Frenchs Forest (3 of these will be lost in Phase One)
- 2 x sports fields in Forestville Park
- 1 x sport field in Ararat Reserve
- 1 x oval in Frenchs Forest Showgrounds
- 4 x sports fields (2 of which are synthetic) and 6 outdoor courts in Lionel Watts Reserve
- 1 x sports field in Belrose Oval
- 1 x sports field in County Rd Reserve
- 2 x sports fields and 1 x oval at St Pious College
- 12 court tennis complex on Oxford Falls Rd (Queenwood)
- 2 x outdoor courts as part of industrial/ not for profit developments (Allambie Rd)
- 4 x sport fields, 3 x outdoor courts, 2 x bowls greens, 6 tennis courts at Forestville War Memorial Fields (just outside a 2 km radius)

The Northern Beaches Sportsground Strategy (2017) found that that there was no significant spare capacity within the current supply across the city. **Based on the analysis within that study, additional capacity will be needed for the planned population growth within the HPSP study area**. **In other words, there is no available capacity to meet demand from Phase One without investment in additional fields or upgrading the capacity of existing facilities.**

Analysis undertaken during the sportsgrounds study also found that the current configuration of the fields at Aquatic Reserve (for baseball) meant that multiple use options for field sports were extremely limited and that unused hours would likely exist on these fields. During winter weeks, the 3 main diamonds were used for less than 13 hours per week. Winter is the peak season for most rectangular field sports and achieving a new rectangular field as a shared use would be an improvement in capacity.

Existing planning for redevelopment of Warringah Aquatic Centre will provide additional capacity for aquatics and fitness.

Upgrading fields to a synthetic surface and providing lights for night-time use could provide additional capacity and can increase average weekly use from around 30 hours to 50. However, the decision to install synthetic fields must be balanced against both the capital cost, the ability to provide the specialised maintenance required and the environmental and local impacts on adjacent land uses.

3.2 Available Capacity to meet Open Space Demand

The existing open space network was assessed in the prior study for capacity to meet additional demand, this found:

- The major shortfall will be locally accessible open space and outdoor recreation opportunities ("walk-to" access). The intensification of urban development in all phases will need to consider the provision of local open space areas. In particular, the Town Centre will have a high population density and limited safe walking access to public open space. There are limited opportunities to provide public open space within the town centre to accommodate the expected population. The primary strategy will be to provide a high-quality central parkland within the Town Centre complemented by a network of safe walking and riding links to surrounding open space areas.
- There are significant supplies of regional open space and bushland areas close to the study area. These have already been activated with trails and other features, and additional connections and trail development would provide additional capacity to meet new demand. The Active Transport Report (Arup, Draft 2018) has identified a number of links and opportunities for expanding the network and linking significant open space areas to the residential growth areas, which are supported by this study.
- Participation and trends analysis indicate that trail and path-based recreation demand will increase and is likely to be significant as a result of the proposed development, linkage with existing trail networks via active transport corridors and new paths will be a critical strategy in meeting demand for active recreation. Additional capacity exists in the locale via the development of proposed bikeway and path networks (as proposed in the Arup Report) and multiple uses of existing linear systems such as the pipeline corridor and powerline easements.

4. Provision Options and Recommendations

The provision options for Phase One are based on meeting needs for that Phase One resident and daytime populations. This Addendum provides an updated provision strategy due to changed circumstances in regard to the provision strategy (primarily the loss of the opportunity at Aquatic Reserve).

The updated strategy is focused on Phase One only to allow Council to finalise their contributions planning for this phase of the precinct.

Key strategies in meeting the anticipated needs are:

1. Expand the capacity of existing sporting spaces and facilities where possible and supplement field space with built solutions.
2. Provide a central park (town centre park) as currently proposed in the master plan, to service the future town centre and higher density residential adjacent.
3. Strategic expansion of key existing parks to improve capacity and accessibility.
4. Expand the extent of trail networks and improve linkages to nature-based trails from the high-density residential areas.
5. Improve active transport and walking links throughout the precinct to address barriers from high volume roads.
6. Ensure shared use of school facilities to provide sporting field and court space.
7. Pursue opportunities for indoor sport and recreation spaces as part of built solutions in the town centre.

The recommended provision strategy is detailed below:

Table 10: Recommended Provision Strategy for Phase One

Provision Element	Strategy	Spatial	Demand Catchment and sharing	Comment
Sporting Infrastructure				
Sport Fields	Develop a new synthetic field with lights as part of the new high school (location TBA)	1.2 Ha	Shared provision with Education 50/50. Council contribution apportioned to Phase 1 demand.	This is a shared outcome and community use should be guaranteed outside of school hours.
	Upgrade the Killarney Heights Oval to synthetic and provide additional practice nets	N/A	Cost to Phase 2-3	Upgrading should including lighting.
	Upgrade the two fields at Forestville Park to high quality/ high-capacity natural turf fields with lights	N/A	100% of cost to Phase One.	This will provide additional capacity for rectangular sport and space for other active recreation. The field is within walking distance of the precinct and an important part of meeting needs arising from Phase One.
Sport Courts	Develop 4 new hard courts at the High School as shared facilities	3000 m2	Shared provision with	This is shared outcome and community use

Provision Element	Strategy	Spatial	Demand Catchment and sharing	Comment
	providing for Netball and Basketball		Education 50/50.	should be guaranteed outside of school hours.
	Develop 2 multi-use courts in the Town Centre with at least one in parkland and a second as a built solution on a roof top or similar.	1600m2	100% to Phase One	Multi-use courts with a focus on recreation and youth use. One court could include tennis.
Indoor Sports	Provide 2 new indoor courts as part of the high school as a shared provision.	1600m2	Shared provision with Education 50/50.	If this is not feasible, then indoor court provision recommended as part of any community sport and recreation facility provided in the town centre.
Indoor recreation program space	Provide a number of indoor program spaces as part of other community facilities and community accessible space at the new High School. A minimum of 1300m2 overall is recommended with no space less than 300m2	1300m2	100% to Phase One	Provision should involve several flexible spaces that can support indoor recreation such as dance and martial arts.
Aquatic Facilities	Upgrade capacity at Warringah Aquatic Centre (WAC) as per current plans.	N/A	12% to Phase One	WAC services a large catchment. Frenchs Forest wider planning catchment is 45% of growth projected for the LGA to 2036. (15,203)- Phase One comprises 28% of this; therefore about 12% of the overall cost should be attributable to Phase One.
Public Open Space and Outdoor Recreation				
Town Centre Parklands	Acquisition and embellishment of land in the town centre (as per current master plan) for a town centre parklands	1.49 Ha	100% to Phase One	This is a critical provision element for the high density residential and town centre elements. It should include the outdoor multi-use court as discussed above.
Parks and Open Space	Acquire additional land to expand Rabett Reserve and upgrade the reserve as per the Master Plan	0.074 Ha	100% to Phase One	Expanding this reserve will improve capacity and access

Provision Element	Strategy	Spatial	Demand Catchment and sharing	Comment
				to help meet demand.
	Pursue opportunities to expand multiple use of Aquatic Reserve through use of land around the Diamonds to provide youth recreation, an informal social sport field and exercise and fitness spaces.	N/A	100% to Phase One	Minor investment strategies to increase informal recreation use of the reserve.
	Embellish Brickpit Reserve as per the Master Plan	N/A	50% to Phase One	Reserve is well located to help meet demand form high density growth
	Upgrade Akora Reserve to increase youth space provision and active space.	N/A	50% to Phase One	This reserve is well located to help meet local park need and youth activity needs
	Recreational Trails Network- Provide additional trail heads on council road reserves and parkland adjacent to trails. Improve signage and wayfinding on trails. Provide new links using public land for trails. Implement the active transport network planning for the HPSP.	N/A	50% to Phase One	More detailed trails planning and costing is required.

5. Warranties and Disclaimers

The information contained in this report is provided in good faith. While Otium Planning Group has applied their own experience to the task, they have relied upon information supplied to them by other persons and organisations.

We have not conducted an audit of the information provided by others but have accepted it in good faith. Some of the information may have been provided 'commercial in confidence' and as such these venues or sources of information are not specifically identified. Readers should be aware that the preparation of this report may have necessitated projections of the future that are inherently uncertain and that our opinion is based on the underlying representations, assumptions and projections detailed in this report.

There will be differences between projected and actual results, because events and circumstances frequently do not occur as expected and those differences may be material. We do not express an opinion as to whether actual results will approximate projected results, nor can we confirm, underwrite or guarantee the achievability of the projections as it is not possible to substantiate assumptions which are based on future events.

Accordingly, neither Otium Planning Group, nor any member or employee of Otium Planning Group, undertakes responsibility arising in any way whatsoever to any persons other than client in respect of this report, for any errors or omissions herein, arising through negligence or otherwise however caused.