LANDSCAPE DESIGN RATIONALE REPORT
Fernhill Destination Play Area

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Children and The Elements

introduction

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Key Requirements

Key to the successful return of design tenders will be the supply of a topographic digital survey in CAD, as well as an up-to-date Arboricultural Survey in CAD with photographs and representations of Root Protection Areas.

In-house design teams may not have detailed technical arboricultural understanding, so it will be important that they understand clearly from the tender documentation which trees it may be possible to be felled as part of their eventual design proposals. An overview of the limitations on excavations or raising of levels in sensitive Tree Root Protection Areas should also be provided to tenderers to minimise the risk of design work impacting negatively on existing trees, particularly in relation to safety surfacing areas and pad foundations to play equipment.

If a 10.00m buffer is required by the Biodiversity Officer to align with 'IFI Urban Watercourses Planning Guide'[1], an overview of the works possible within the buffer must be given to the tenderers so that they understand that works in the buffer can be conducted only by hand or by mini-digger, that amenity use is possible in the buffer area, and that concrete curing should be avoided within the buffer to minimise the risk of a fish kill for example.

What's Good About the Existing Concept?

1. It's in a lovely, wooded area called the Orchard, blessed with the sounds of water, and immersed in nature. If a play area can be installed without affecting negatively on tree root protection areas or on the adjacent watercourse, this area will provide a wonderful attraction and a chance for children to immerse themselves in nature
2. It's beside a stream, and water play is one of the best things to offer children
3. The existing design has been produced based on consultation with local children conducted as part of a CreativeIreland programme conducted in 2017, and also a public consultation process in relation to the larger park in that year. Children's voices heard in consultation called for things like a destination playground, adventurous play, immersion in nature, contact with natural materials, sensory stimulation, and interaction with the elements. The submitted design and the chosen site meets many of the children's asks.

Above: Aerial view of location of site and local receiving environment, 2024. © Airbus, CNES/ Maxar Technologies

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1 https://www.fisheriesireland.ie/media/ifi-urban-watercourses-planning-guide

Review of the Existing Concept

Areas shown on drawing titled 'Fernhill Woodland Adventure Play' are named as follows:
1. The Enclosure;
2. The Clearance;
3. The Avenue;
4. The Wall (no drawings for this element);
5. The Low Bank.

There may be additional drawings available which address the suggested Toddler Play Area, etc. 1.
The positives of the place itself:
- Proximity to toilets to the north and south;
- Proximity to the car-parking to the north-west and to the café at the south-west
- Location in a woodland close to a hillside stream which has been dammed at several place to create waterfalls and little pools
- Sloping topography in the surrounding area which has inherent play value
- Secret garden feeling of the existing garden
- Heritage trees

The positive ideas of the Hideaway/Hideout (location no. 5 on the drawings:
- Concept of adventurous play at height among the tree canopy
- The location near the stream
- Things happening under an elevated platform
- a slide and a tunnel crossing the stream
- Loose materials or water being hoisted up to an elevated platform
- Fireman's pole, zip-line, ways-up and ways-down, netting, interaction & communication between different levels.

The negative ideas of the Hideaway/Hideout:
- An expansive elevated platform will require a long ramp to allow children with disabilities (or carers with disabilities in the event of a 'meltdown') access the play attraction; this will eat up a significant part of a budget without offering enough play value concept:
- Difficult to resolve heritage tree Root Protection Areas with required excavations for play equipment foundations or required excavation or increased levels to accommodate required safety surfacing depths for a minimum 3.00m critical fall height
- Proximity to heritage trees with known issue of limb-drop as they age (public health and safety concern, and public play should not be co-located with this)
- Details such as an elevated platform should not have any gaps in it if children are playing underneath (dust, dirt and stones falling); the

concept slide wouldn't work (topography, levels); the concept zip-line wouldn't work (not from the platform height!); platform shape (any curved shape is really expensive, the same effect can be had by angling around trees).

The positive ideas of the Ribbon/Tree Adventure Runways (location no. 2 on the drawings):
- Being able to experience the tree trunks and canopies at different levels is a nice idea
- Contains things like high platforms for children to enjoy the tree canopy and the views over the city and mountains
- Climbing ropes and netting
- Pendulum seats, tyre swings, monkey bars, fireman's pole

The negative ideas of the Ribbon/Tree Adventure Runways (location no. 2 on the drawings):
- Likely expensive financial cost of creating this route as illustrated on the concept drawings
- Likely negative impact on existing tree roots which would be occasioned by foundations for the linear platform structure to the Ribbon as well as a required increase in levels to accommodate safety surfacing depths (likely to be around 0.50m in depth)
- Lack of consideration shown in the concept for access and play by children and carers with disabilities
- Impact on a strong existing historic landscape feature of heritage trees

Above: Aerial view of site and local receiving environment 2023, © Blom, TomTom VexCel Imaging & Microsoft, with location of subject site highlighted with location icon

Recommendations

1. **Sensory Loop Trail:** The objectives of the project and site might be better served than the Ribbon design proposal, by providing a looped trail route with all-abilities access and intervals of sensory-stimulating play along it, especially sound, because you hear the sound before making the sound which is enchanting. Sensory trail opportunities can be provided parallel to an accessibly-surfaced wheeling route. Things that could be enjoyed along a sensory trail are sound (dendrophones, xylophones, singing stones, gongs, chimes); tactile bare-foot trail (pine cones, river-washed pebbles, sand and gravel); a table you can put your collection of natural loose parts on, etc.

2. **Contact with Nature (Water):** The site is beside a stream, where the sound of bubbling water will be a repeated enchantment and attraction for children. Water play is one of the best things to offer children. An existing scrubby vegetated riparian buffer is present along the watercourse, with an existing bridge leading from the car-park at the southern corner of the subject site. Understanding the biodiversity importance assigned to the riparian buffer zone and the Biodiversity Office request for the 10.00m width buffer, we suggest a direct 'playful' wobbly suspension bridge connection from the car-park into the northern corner of the site as a minimum intervention for children here, which will offer children using wheeled mobility devices a chance to experience movement in their wheelchair or pushchair for example, and get them close to 'The Coolest Thing', on an accessible route.

3. **Future(?) Contact with Water:** Things crossing the water such as stepping stones, wobbly bridges, net crossings etc could be included. The water will have the biggest play value of the whole space and children will be naturally attracted to it. Water is the most manipulatable natural material and is vital for STEM play. An Archimedes Screw or Mill Wheels could be fun here, located at a shallow basin created for a future water play area. Access to the water could be provided at certain points, to be agreed in consultation with the Biodiversity Officer at that time. Attraction of children to water will lead them to respect natural elements, not destroy them. By allowing children to inquire in a natural way, we can help them to become environmental champions.

4. **Ribbon:** The Ribbon as envisaged will be impossible to deliver both in terms of minimising damage to the existing heritage trees and budget costs. Our suggestion is instead to provide a 'ribbon' of graduated and multiple challenge play experiences in the southern corner of the triangle, the 'Orchard' area, away from the important heritage tree avenue, and in an area of shrubby trees next to the riparian buffer zone. This is far enough away from the ongoing risk of limb-fall presented by the beautiful Cypress avenue.

5. **Can I?:** Access should be provided for children of all ages and abilities to play at and in 'The Coolest Thing'. 100% of 'the Coolest Thing' does not need to be accessible, but children need to be able to get to it, to play there, and to stay there for a while. In the design concept this is the elevated Hideaway platform or the Ribbon, neither of which anticipate access for all in the original concept

6. **Hideaway:** We suggest the inclusion of a play tower as the destination attraction at the northern corner of the site instead of the Hideaway proposal, where the loose-fixed tree trunk with shingle roof is currently located. This would have a small 'plan' size but be tall in elevation, approx 10.00-11.50m height. A tight plan size will have less impact on existing tree RPAs than a widely-spread arrangement, especially in relation to excavations for foundations and for increases in levels for safety surfacing. This would offer great views over the landscape in the winter months, and through the tree canopy when the trees are in leaf. Play opportunities provided in the tower could include things like an access level with extended terrace, a firemen's pole, inclined climbing nets, flags, windmills, wind-cones, kaleidoscope, rotating discs mounted on walls, conference phones for communication between different levels, wind discs, tunnel and platform slides, turning circle, octascope and telescopes, and dendrophones. The tower could be influenced by local cultural heritage, such as the nearby ruin of a Tower House off Kilgobbin Road (Heritage Officer to advise?).

7. **Connections:** 'Playful connections' must be provided going up and down between the ground level and the elevated platforms of the tower, so that children who can't access 100% of the play offer can still communicate and play with the children above them (e.g. conference phones).

8. **Toddler Play:** an elevated hut 'village' with wooden animals surrounding it to recall the Droimeann cattle herd, grazing goats, with bit of sound so that young children can send messages to each other or their family, like yodelling. Providing a playful setting for loose materials play and manipulation would be key here, with scope for solitary play for very young children

Above: Detailed bird's eye view of site and local receiving environment, 2024 © Blom, TomTom VexCel Imaging & Microsoft

(wobblers), and communicative play for older children and toddlers.

9. **Safety Surfacing:** should be of natural materials such as grass, engineered wood-chip, play bark, pea gravel, or play sand depending on the Critical Fall Height for environmental reasons, end-of-life recycling, ease of replacement and annual inspection of foundations, permeability to existing tree roots, and natural woodland setting

10. **Totem Tree:** To signal that the playspace is about to happen soon, we suggest carving the existing dead standing beech tree, along the boundary with the Heritage Garden, into a sculpture

11. **Details:** A curved-shaped platform will be too expensive; if adventure at height in the tree canopy is desirable then for best financial value a platform constructed of straight or angled lines is most efficient. Elevated platforms should be constructed in such a way that dust, dirt, or stones can't fall on a child playing below (i.e. constructed in tongued-and-grooved boards or solid plywood sheeting)

Key Takeaways

- Play provision should be limited to the defined area to avoid heavy traffic in limb-fall areas.
- Play equipment to be made from whole wood, in as natural a state as possible, unimpregnated
- Use of 'found' items, e.g. tree trunks, where possible, to be incorporated.
- The design should be nature-inspired, manipulative, and dynamic.
- A wide range of play affordances provides inclusivity as the individual can perceive and act on them in different ways depending on their abilities, experiences and characteristics.
- The playspace design should stimulate all kinds of play.
- Environments which support a wide range of play types have the greatest value for children.
- Appropriate loose-fill materials in surfacing

One of the key aspects of the council's ambition is to attract visitors to the area and to create a playspace that equals or improves on the best adventure play spaces in Ireland. The council wishes to:

- Create and maintain a safe, inclusive, child-centred, free, adventurous playspace where children and young people can play, explore, create, and socialise
- Provide a space that improves the health and well-being of children and young people
- Create a rich and varied playspace that promotes a wide range of play activities and encourages youth to manage risk independently
- Undertake the playspace aligned with Fernhill Park and Gardens masterplan, ensuring appropriate linkages and protecting the existing environment

The playspace at Fernhill needs to be developed to a standard whereby it becomes such a visitor attraction. This can be done by becoming a destination playspace for a much wider catchment than present. This will require significant investment and creativity of design to ensure that the playspace fulfills that role and provides lasting memories for users both young and old.

In response to the decline in children's outdoor play in recent decades[1] and the increase in urban populations,[2] municipalities, communities and

1. Dodd, H. F., FitzGibbon, L., Watson, B. E., & Nesbit, R. J. (2021). Children's play and independent mobility in 2020: Results from the British children's play survey. International Journal of Environmental Research and Public Health, 18(8), 4334. doi:https://doi.org/10.3390/ijerph18084334
2. 60% of the world's children are projected to live in cities by the year 2030, UNICEF. (2019). 'Advantage or paradox? The challenge for children and young people of growing up urban' Retrieved from

practitioners have tried to deliver better play opportunities in towns and cities.[3]

Such play opportunities often take the form of public playgrounds, located in neighbourhoods or areas that people are willing to travel to. These playgrounds usually contain 'formal' play equipment and safety surfacing and have evolved over recent decades to include natural elements such as mounded areas, boulders, logs, and sand.

Planners, designers and developers should provide inclusive playspaces full of adventure and challenge for people of all ages and abilities. There is a need for at least one destination playground in Fernhill Park & Gardens to generate increased visitor numbers from the considerable catchment area.

Happy children occupied by a challenging playspace increase length of stay (and thus spend per head) and encourage repeat visits to a location.
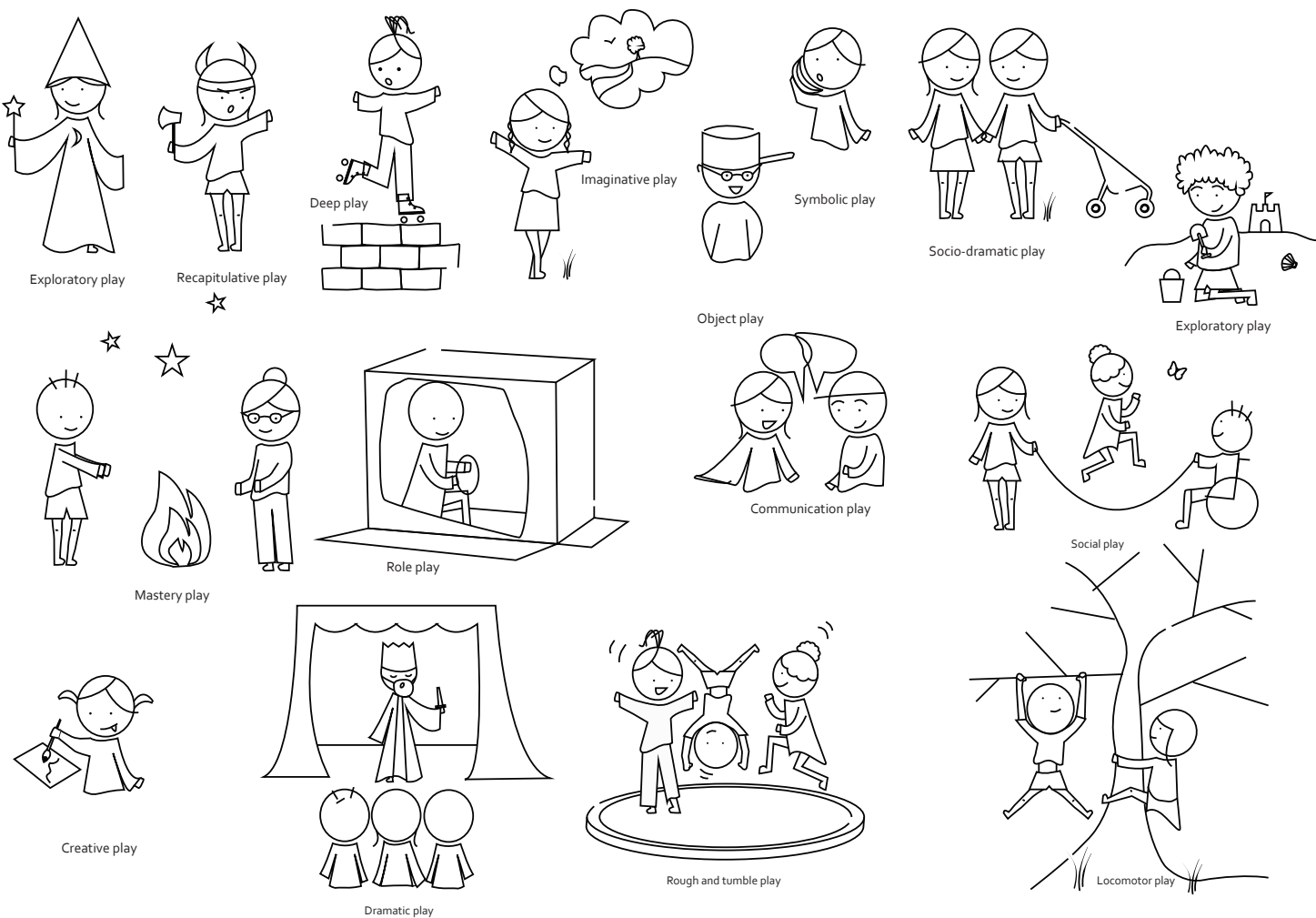
To keep children engaged, such destination playspaces should offer challenges to all ages and abilities – think height, risk, speed, uncertainty for some but lesser, equivalent challenges for others to overcome and build confidence. In short, challenges that may take a few visits to conquer.

Design teams must not forget other play types either – niches to hide in and role play, parts and elements to manipulate, and shapes, colours, textures sounds and smells to stimulate the senses. The landscape itself should be full of play value integrating fixed equipment which itself should be as natural as possible.

A way of both creating a strong sense of identity and place, and measuring feedback is to 'title and hashtag' #The Orchard itself, and the destination playspace #The Lookout. This can be done on the DLRCoCo & Fernhill Park & Gardens social media pages, (as well as physically defined in the play sequences using paving inserts in footpaths).

Being able to pre-plan your visit to Fernhill Park & Gardens will make families, especially those with family members living with disabilities, more confident welcome, and supported. Encouraging people to name and 'hashtag' their visit to the park and its playspaces will help get helpful feedback, highlight issues and raise awareness.

https://data.unicef.org/resources/urban-paradox-report/
3. Arup & The Lego Foundation. (2020). 'Reclaiming play in cities: The real play coalition approach'. Retrieved from https://www.realplaycoalition.com/reclaiming-play-in-cities-report/

Exploratory play · Recapitulative play · Deep play · Imaginative play · Symbolic play · Socio-dramatic play · Exploratory play · Object play · Mastery play · Role play · Communication play · Social play · Creative play · Dramatic play · Rough and tumble play · Locomotor play

Bob Hughes, a play theorist and activist, has identified a number of different types of play, expressed above in graphical form, as a 'Playworker's Taxonomy' in Play Scotland's guidelines 'Play Types Toolkit: Bringing more play into the school day'[1].

Hughes stated that: "*Play is an essential part of a happy, healthy childhood and when children play their brains do two things: they grow and they become organised and usable*.'

1. 'Play Types Toolkit: Bringing more play into the school day', Play Scotland, Scotland's Play Strategy, 2006; graphic expresses a Taxonomy of the Playworker's Play Types, identified by Bob Hughes in his book 'Evolutionary Playwork and Reflective Analytic Practice'.

Design Principles for the Playspace

Child-friendly planning principles design supports design-for-all, from ages 2-92. Our team's evolved design for the hierarchy of public and communal amenity open space at the subject site has been influenced and informed by the findings and recommendations of Rotterdam, and in particular Tim Gill's recent book on child-friendly cities. Recently towns and cities have begun to try and make their streets and open spaces more welcoming and supportive to children and families.

Researcher Natalia Krysiak notes that at 'the heart of a child-friendly neighbourhood lies the desire to provide children with opportunities to create meaning and a sense of belonging'.[1] Krysiak identifies six factors that positively contribute to children's health and well-being, including:
• Access to Nature
• Social Connectedness
• Playability
• Active Mobility
• Sense of Ownership
• Agency & Decision-Making

Play advocate Tim Gill expands on these principles in his 2021 book 'Urban Playground', identifying the 'green' suburb of Vauban in the city of Freiburg, Germany as 'the ultimate child friendly neighbourhood'.[2] Gill believes that by putting children first, we can make better places for everyone.

Author and play advocate Gill states that only where you have high levels of children's mobility and a lot of choice of things for them to do, are you in the desired 'quadrant' of a child-friendly neighbourhood. Children's 'mobility' means their ability to get to spaces and facilities, especially independently. Play 'affordances' means the number and type of playable spaces and facilities in a neighbourhood; these don't have to be formal 'playgrounds'.

Gill identifies 10 strategic indicators for a child-friendly neighbourhood:
1. I can walk to school/local shops, without an adult (from age 8).
2. I cycle to school/local shops without an adult (from age 8).
3. I go outside and play within sight of my home (up to age 11).
4. I feel welcome and safe outside, during the day and after dark.

1   'Exploring Best Practice for High Density, Child Friendly Neighborhoods', Natalia Krysiak, Cities for Play, May 2020
2 'Urban Playground: How Child-Friendly Planning and Design Can Save Cities', Tim Gill, RIBA 2021
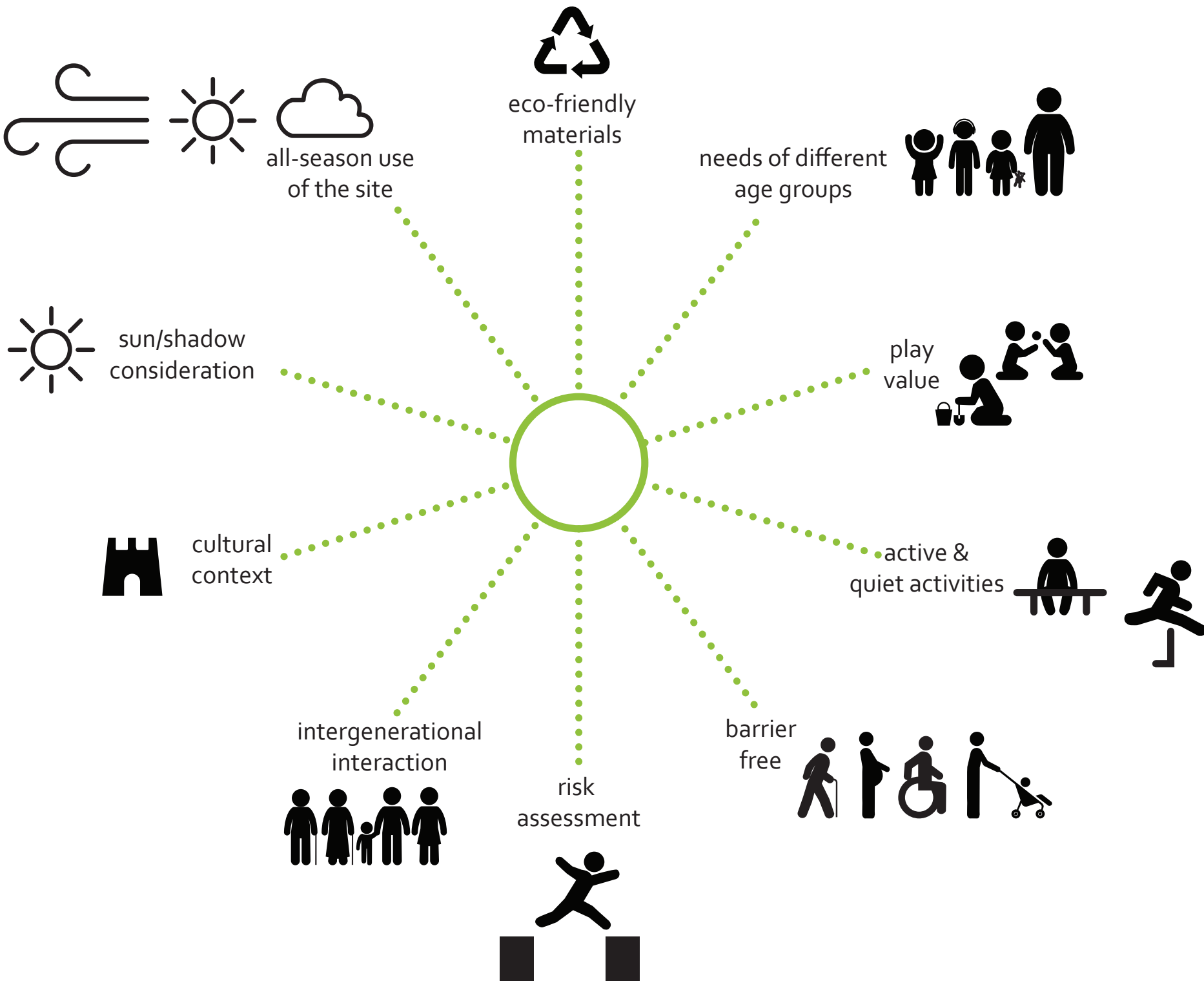
Above: Design principles considered in the development of child- and age-friendly neighbourhoods, considered in the design of the amenity areas at the subject site

5. I have access to natural green space in my neighbourhood.
6. I have access to an outdoor place in my neighbourhood that is peaceful and quiet.
7. My neighbourhood has lots of trees.
8. I have access to a choice of outdoor places in my neighbourhood where I can meet and spend time with friends and there are fun things for us to do, including places where I can test myself and take some risks.
9. I have access to an outdoor place in my neighbourhood where my extended family and friends can have a picnic.
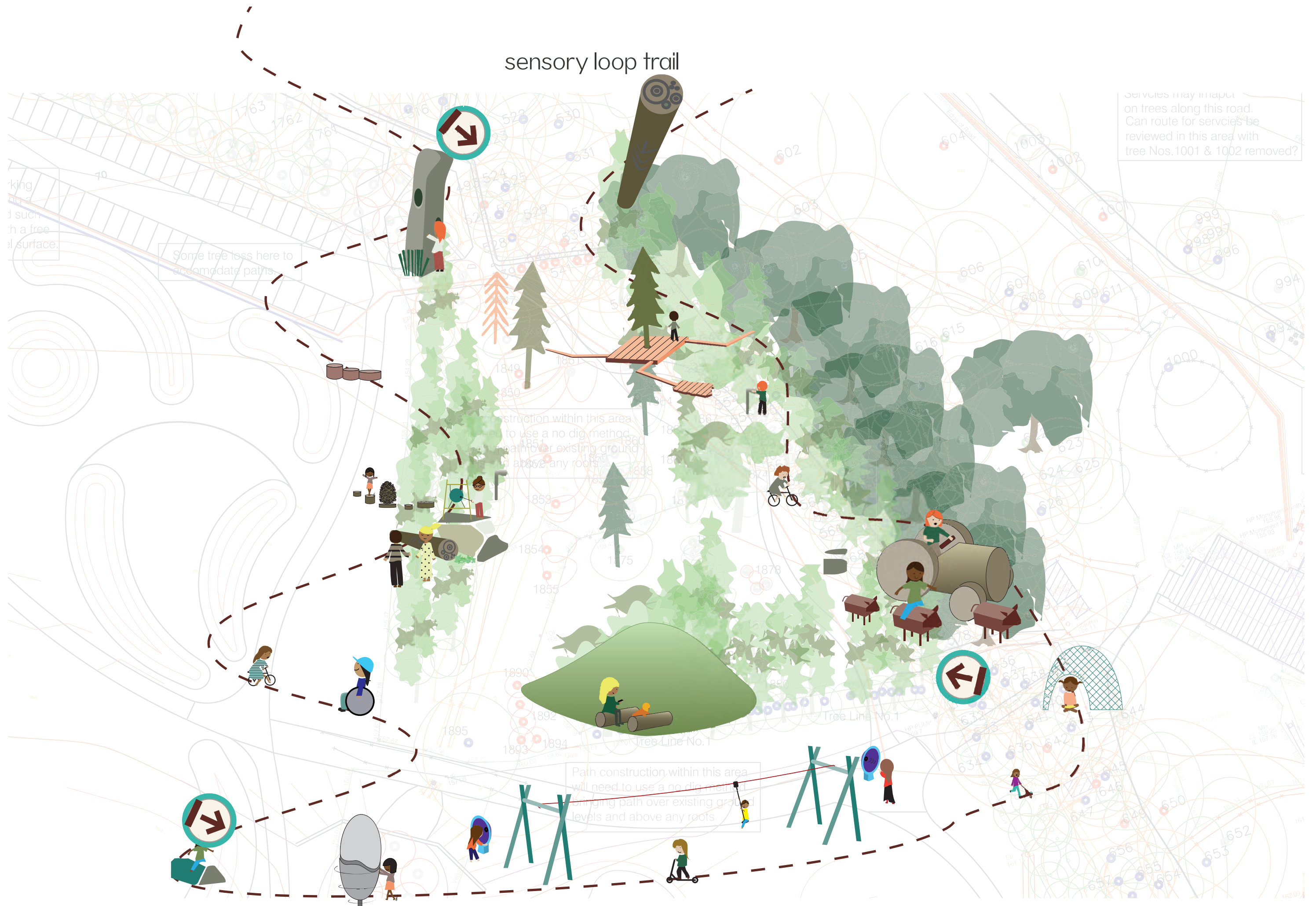10. I travel from my own neighbourhood to 'downtown' areas on foot, by bike or by public transport (from age 11).

play tower destination attraction

orchard play ribbon

young children play

Above: Concept illustration showing locations for Toddler Play, Orchard Ribbon Play, Swings, and Tower

sensory loop trail

Above: Concept illustration of Sensory Loop Trail

tower destination attraction

2

Tower Destination Playspace...things like

Above: Concept illustration of Destination Attraction Play Tower

orchard play ribbon

3

Orchard - Climbing Structure set in Woodland...Things Like

Orchard - Climbing Forest set in Woodland...Things Like

Orchard - Forest Fountain set in Woodland...Things Like

young children play

4

sensory loop trail

5

Sensory Loop Trail...Things Like

Sensory Loop Trail - Things Like...