

A BLUEPRINT FOR DEVELOPING A CYCLING HUB

TABLE OF CONTENTS

SECTION 1

Cycling Hubs Overview

SECTION 2

Developing a Cycling Resource

SECTION 3

Cycling Hub Checklist

SECTION 4

Learning from Best Practice

SECTION 5

Cycling Hub Innovation



Mission

To provide flexible design and development guidance for the creation of cycling hubs across a variety of locations and site options to deliver a focal point for cycling across our communities.

Purpose

The cycling hub blueprint has been developed by Cycling Ireland as an overarching guide for coordinated planning and development of cycling hubs across Ireland. It provides a vision, guiding principles and cycling hub development options for consideration by local authorities, land owners, clubs, schools and the community.

The blueprint expresses the aspirations of Cycling Ireland to achieve improved and sustainable outcomes for cycling hub development across the county contributing to the growth of cycling within the community. In the immediate to longer term cycling hub development will contribute to;

The support of the progression of cycling pathways introducing children and adults to cycling in a safe environment.

The support of the development of well trained people to grow participation in cycling within local communities.

The creation of strong local organisations and structures to sustain community engagement with cycling as a physical activity and sport.

The provision of quality facilities across the country.

How to use the blueprint

The blueprint is structured around three categories of cycling hubs. Guidance is provided on the options and possible configuration of cycling hubs and likely user groups to ensure long term sustainability. Background detail is provided on the variety of cycling facilities that can be incorporated into a cycling hub and how to consider extending site usage on a year round basis.

The blueprint is designed to provide suggestions and usage scenarios on how different sites and local amenities can accommodate the creation of cycling hubs without significant capital investment. The blueprint assists organisations identify hub components that may be developed singularly or as part of a wider cycling amenity developed on a modular approach. A development checklist provides a step by step guide from project inception to on site delivery. This is supported by indicative costs categories and a development framework.



Guiding Principles



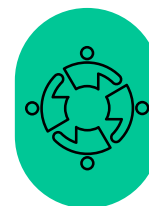
Access

Consideration is given to ease of access for all members of the community



Engagement

The community and cycling user groups will identify cycling hubs as a resource for all



Community Benefit

Cycling hubs will offer social, health and wellbeing benefits for all members of the community



Quality

Good planning, development and maintenance will deliver fit for purpose, sustainable and high quality hubs



Consistency

All stakeholders will embrace the blueprint to deliver a consistency in the delivery of cycling hubs



Sustainability

Cycling hub planning and development takes account of the immediate to long term community, social, health, and environmental considerations



Innovation

Cycling hubs will reflect continuous advances in cycling facilities and the needs of the user groups



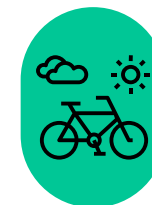
Participation

Cycling hubs will grow the level of cycling participation across every age and stage of life as a lifetime activity



Inclusion

Cycling hubs are welcoming environments for every member of our community



Sport development

Cycling hubs will act as a gateway to the sport of cycling in line with the strategy of Cycling Ireland



Cycling Hubs OVERVIEW

OVERVIEW

A cycling hub is a community focal point for cycling development for all ages. The hubs will provide a mix of cycling infrastructure facilitating participation, training opportunities for all levels and the promotion of physical activity based around cycling. Three categories of cycling hub have been proposed from an entry cycling amenity to co-shared facilities and the development of standalone hubs.

Each category features a mix of facilities that will support the goals of cycling hubs from supporting the progression of cycling pathways, to training resources and enhancing the quality of facilities available across the island of Ireland. This approach to cycling hubs is designed to provide a flexible and modular framework for developing cycling facilities based on existing local resources, spaces and immediate opportunities for local partnership.



CYCLING HUB: OPTIONS TO CONSIDER

Cycling Hub CYCLING AMENITY



CYCLING FACILITIES

- Learn to Ride areas
- Pump Tracks
- BMX Track
- MTB Skills Areas

EXAMPLES

Providing a relatively level, surfaced area in a vehicle-free space for beginner and novice cyclists to learn to ride.

Building a pump track in an existing public park amenity.

Cycling Hub CO-SHARED AMENITY



CYCLING FACILITIES

- Learn to Ride areas
- Pump Tracks
- BMX Track
- MTB Skills Areas

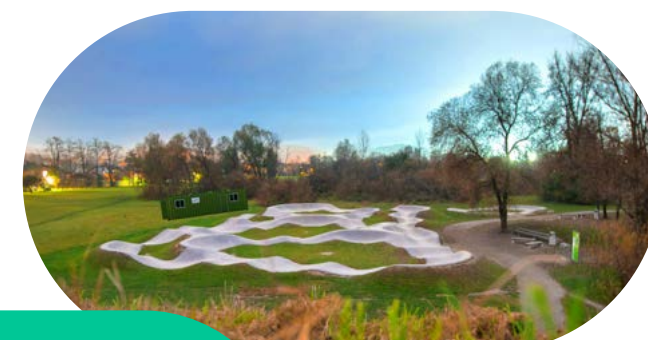
USE OF / REPURPOSE EXISTING FACILITIES

- School buildings
- Sports centre
- Sports clubs facilities
- Local community centres

EXAMPLES

Provision of a learn to ride area in a school playground with the conversion of an underused school shed for bike and equipment storage used in sports programming. A pump track could be developed on public amenity land outside the school.

Cycling Hub STANDALONE HUB



CYCLING FACILITIES

- Learn to Ride areas
- Pump Tracks
- BMX Track
- MTB Skills Areas

DEDICATED HUB SPACE

- Classroom space
- Storage space
- Repurposed buildings
- Vacant education / health premises
- Vacant commercial/industrial space

EXAMPLES

Providing storage and classroom space at an existing cycling facility to deliver sports programming / bike education activity. Site could facilitate social enterprise activity such as bike maintenance.

Building a pump track and learn to ride area in a vacant industrial unit creating a standalone cycling hub able to deliver sports programming and home for cycling clubs in the area.



1.1 CYCLING HUB

Cycling Facility Options

OVERVIEW

The cycling facility options section provides an overview of the range of cycling facilities that can be considered for cycling hubs from learn to ride amenities to intermediate and advanced facilities. The options contain a variety of considerations from type of locations, suitability for various cycling user groups, space required, to indicative pricing for the options.

	Learn to Ride Area	Beginner Pump Track	Intermediate Pump Track	Advanced Pump Track
POSSIBLE LOCATIONS				
	Primary School	Primary School	Secondary School	Town Park
	Secondary School	Secondary School	Small Neighbourhood Park	Country Park
	Town Park	Small Neighbourhood Park	Town Park	Sport Centres
	Sport Centres	Town Park	Sport Centres	
	Local Community Centres	Sport Centres		
	Sports Club Facilities			
AREA REQUIREMENTS				
Minimum Area	25 x 15 metres	20 x 30 metres	60 x 40 metres	80 x 50 metres
Minimum rideable length	N/A	50 metres	140 metres	180 metres
SITE GEOGRAPHY & CHARACTERISTICS				
	Flat level ground	Flat level ground Direct access for lorry	Flat level ground Direct access for lorry	Flat level ground Direct access for lorry
SPECIALIST DESIGN REQUIREMENT				
	No	Yes	Yes	Yes
SPECIALIST CONSTRUCTION REQUIREMENT				
	No	Yes	Yes	Yes
SUITABLE FOR (PEOPLE)				
	Primary School age Children	Primary School age Children	Primary School age Children	Secondary School age Children
	Secondary School age Children	Secondary School age Children	Secondary School age Children	Adults
	Adults	Adults	Adults	Progressing Intermediate riders
	Total Novices	Beginners	Beginners	Advanced & Expert Riders
	Beginners	Intermediate riders	Intermediate riders Advanced & Expert Riders	
SUITABLE FOR (BIKES)				
	Any bike	Balance Bike Hardtail Mountain Bike BMX Dirt Jump Bike	Hardtail Mountain Bike BMX Dirt Jump Bike	Hardtail Mountain Bike BMX Dirt Jump Bike
INDICATIVE BUDGET				
Euro(€) / GBP(£) (exchange rates as of Dec 2021)	€ 15,000 / £13,000	€ 60,000 / £51,000	€ 140,000 / £120,000	€ 180,000 / €155,000
Rate (can vary significantly)		€1,000 / £850 per linear metre	€1,000 / £850 per lin. m.	€1,000 / £850 per lin. m.

	Modular Pump Track	Beginner MTB Skills Area	Intermediate MTB Skills Area	Advanced MTB Skills Area
POSSIBLE LOCATIONS				
	Primary School	Primary School	Secondary School	Country Park
	Secondary School	Secondary School	Town Park	Sport Centres
		Neighbourhood Park	Country Park	
		Town Park	Sport Centres	
		Country Park		
		Sport Centres		
AREA REQUIREMENTS				
Minimum Area	12 x 22 metres	0.25 hectares	0.25 hectares	1.25 hectares
Minimum rideable length	35 metres	60 metres	400 metres	1200 metres
SITE GEOGRAPHY & CHARACTERISTICS				
	Flat level ground	Level and slightly sloping ground	Sloping ground	Sloping ground
SPECIALIST DESIGN REQUIREMENT				
	No	Yes	Yes	Yes
SPECIALIST CONSTRUCTION REQUIREMENT				
	No	Yes	Yes	Yes
SUITABLE FOR (PEOPLE)				
	Primary School age Children	Primary School age Children	Older Primary School age Children	Secondary School age Children
	Secondary School age Children	Secondary School age Children	Secondary School age Children	Adults
	Adults	Adults	Adults	Progressing Intermediate riders
	Beginners	Beginners	Beginners	Advanced & Expert Riders
	Intermediate riders	Intermediate riders	Intermediate riders	
	Advanced & Expert Riders			
SUITABLE FOR (BIKES)				
	Balance Bike	Any Bike	Mountain Bike	Mountain Bike
	Hardtail Mountain Bike			
	BMX			
	Dirt Jump Bike			
INDICATIVE BUDGET				
Euro(€) / GBP(£) (exchange rates as of Dec 2021)	€35,000 / £30,000	€50,000 / £43,000	€70,000 / £60,000	€100,000 - €250,000 / €85,000 - £215,000
Rate (can vary significantly)		€50 / £43 per lin. m.	€60 / £50 per lin. m.	€80 / £68 per lin. m.

	Regional BMX Track	Grass Track	Local Trail Centres	Closed Road Circuit
POSSIBLE LOCATIONS				
	Sport Centre	Primary School	Large Town Park	Town Parks
	Large Park	Secondary School	Sport Centres	Sport Centres
		Town Park	Disused Golf Courses	
		Sport Centres		
		Local Community Centres		
		Sports Club Facilities		
AREA REQUIREMENTS				
Minimum Area	0.65 hectares		3 hectares	3 hectares
Minimum rideable length	350 metres		2,000 metres	1,000 metres
SITE GEOGRAPHY & CHARACTERISTICS				
	Level or slightly sloping ground		Sloping ground required	Level or sloping ground
	Direct access for lorry			
SPECIALIST DESIGN REQUIREMENT				
	Yes	No	Yes	Yes
SPECIALIST CONSTRUCTION REQUIREMENT				
	Yes	No	Yes	No
SUITABLE FOR (PEOPLE)				
	Intermediate BMX racers	Primary School age Children	Primary School age Children	Primary School age Children
	Advanced BMX racers	Secondary School age Children	Secondary School age Children	Secondary School age Children
		Adults	Adults	Adults
		Beginners	Beginners	Beginners
		Intermediate riders	Intermediate riders	Intermediate riders
		Advanced & Expert Riders	Advanced & Expert Riders	Advanced & Expert Riders
SUITABLE FOR (BIKES)				
	BMX	All bikes	Mountain Bike	Road Bikes
INDICATIVE BUDGET				
Euro(€) / GBP(£) (exchange rates as of Dec 2021)	€175,000 / £150,000		€150,000 / £130,000 upward	€800,000 - €1.2m / £680,000 - £1m
Rate (can vary significantly)	€500 - €600 / £425 - £500 per lin. m.		€60 - €80 / £50 - £70 per lin. m.	€12,000 / £10,000 per lin. m.

1.2 CYCLING HUB

Extending Cycling Hub Usage

OVERVIEW

The modular approach to developing cycling hubs offers the opportunity to incorporate semi permanent structures such as re-purposed storage containers to expand the usage options for hubs. The addition of such structures or incorporating existing buildings into a cycling hub will facilitate an extended level of usage from introducing people to cycling, cycling pathway programme delivery, coach education or delivering classes in activity such as bike maintenance. These structures and blend of facilities are designed to cater for a mix of storage and / or on site training or cycling education uses.

Extending Cycling Hub Usage

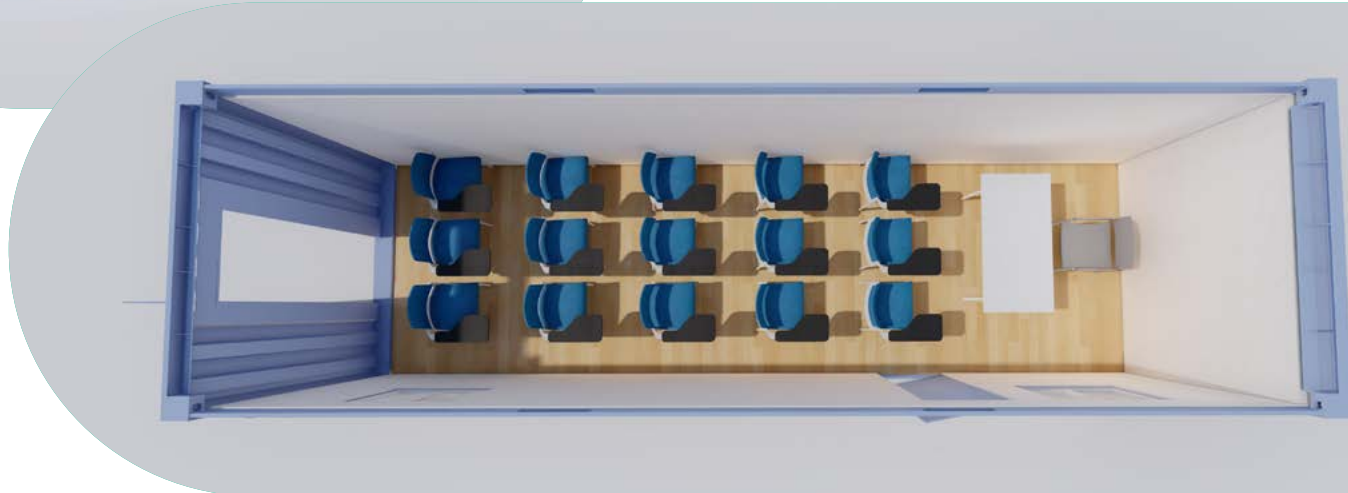
Elements of the cycling facilities matrix can be enhanced to develop a standalone cycling hub. The provision of semi-permanent spaces offers increased flexibility in the delivery of cycling programming and training with training room and bike storage capacity provided.

Shipping containers and modular units are being increasingly used as part of active travel networks providing bike rental and storage facilities. Within the cycling community containers have been developed to become education bases that deliver training programmes while offering a meeting location and venue for local cycling clubs.

Once established, a standalone hub has the potential to evolve and expand to reach a wider audience through the creation of cycling-related social enterprises and pop-up ventures providing bike servicing and repairs with associated retail elements such as second-hand bike sales and accessories.



EcoMatters Social Enterprise
Bike Hub, Auckland
(Image: EcoMatters)



Standalone Cycling Hub – Cycling Cabins

Potential Locations

Storage containers (Cycling Cabins) can be provided in conjunction with cycling facilities to create a standalone cycling hub.

Cabins will require flat level ground, accessible for delivery and placement by HGV and lifting equipment. Some minor groundworks may be required to prepare the site for delivery.

Suitable locations for cycling cabins include car parks and existing areas of hardstanding or asphalt.

Cycling cabins should be in proximity to public amenities (e.g. toilets) with provision of litter bins considered.

The site should have access to an electricity supply for the lighting and delivery of classroom-based activities

Typical Dimensions & Characteristics

Shipping containers that can be converted into cycling cabins are available in a variety of sizes up to 40ft long and 8-10ft wide.

Containers are built to ISO standards with a long-life expectancy. 'New' one-trip containers have been manufactured overseas, loaded with cargo, and shipped to Ireland. Older, used containers are also available.

The customised fit out for cycling classroom cabins may include electrical fit out, lighting, windows, doors, flooring and wall lining. There are several suppliers of both converted and basic containers in Ireland.

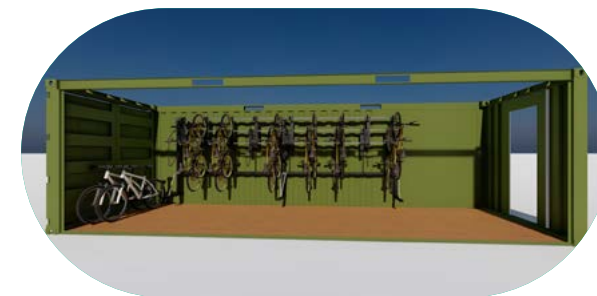
A 20ft x 10ft cycling classroom cabin should be able to accommodate a class of 12. The supplied converted container can be equipped with chairs with lecture arms, a projector and table. Portable electric heaters may be desirable if not pre-installed. A ramp should be provided for wheelchair and mobility impaired users.

A 20ft shipping container used as a cycling storage cabin will store approximately 40 bikes. Consideration can be given to the provision of bike racks in the cabin for easier storage.

Cycling Hub Usage Opportunities

The cycling hub offers a range of cycling progression opportunities including:

- Delivery of cycling programming to all ages and abilities
- Storage of bikes and equipment used in cycling programmes
- Delivery of bike maintenance workshops and classes
- Base and meeting point for local cycling clubs and elite training groups
- To become the focal point for cycle events including Bike Week activities



SECTION 2

Developing a Cycling Resource

OVERVIEW

Developing a cycling resource provides a design summary of the range of cycling facilities that can be considered for inclusion within a cycling hub, as a singular entity or part of a wider sports or cycling amenity.

Indicative budget estimates for capital expenditure are based on analysis by industry experts (November 2021). The figures are indicative and illustrative of typical costs. Final estimates will vary based on factors such as the final mix of facilities, geographic location, overall site area and site topography.

Indicative Budget Range

€1k - €50k / £0k - £42.5k

€1k - €50k / £0k - £42.5k

€1k - €50k / £0k - £42.5k

€1k - €50k / £0k - £42.5k

€1k - €50k / £0k - £42.5k



LEARN TO RIDE AREA



Design Summary

Flat level ground, typically of asphalt or concrete construction aimed at providing a safe, traffic-free area for the delivery of cycle training for beginner and novice cyclists of all ages. Suitable locations may included marked / coned areas of an existing school playground to new build layouts including turns and road marking to aid in development of rider etiquette. Users of Learn to Ride areas will be young children and those with little or no cycling experience. Locations that necessitate cycling beyond their experience to access the facility should be carefully considered and risk assessed.



Specialist Design Requirement

⚙ No



Specialist Construction Requirement

⚙ No



Area Required & Characteristics

- ⚙ Minimum 25x15m
- ⚙ Flat level ground



Potential Location

- ⚙ Primary school grounds
- ⚙ Secondary school grounds
- ⚙ Town park
- ⚙ Sports Centre



User Profile

- ⚙ Primary school age children
- ⚙ Secondary school age children
- ⚙ Adults
- ⚙ Total novices
- ⚙ Beginners



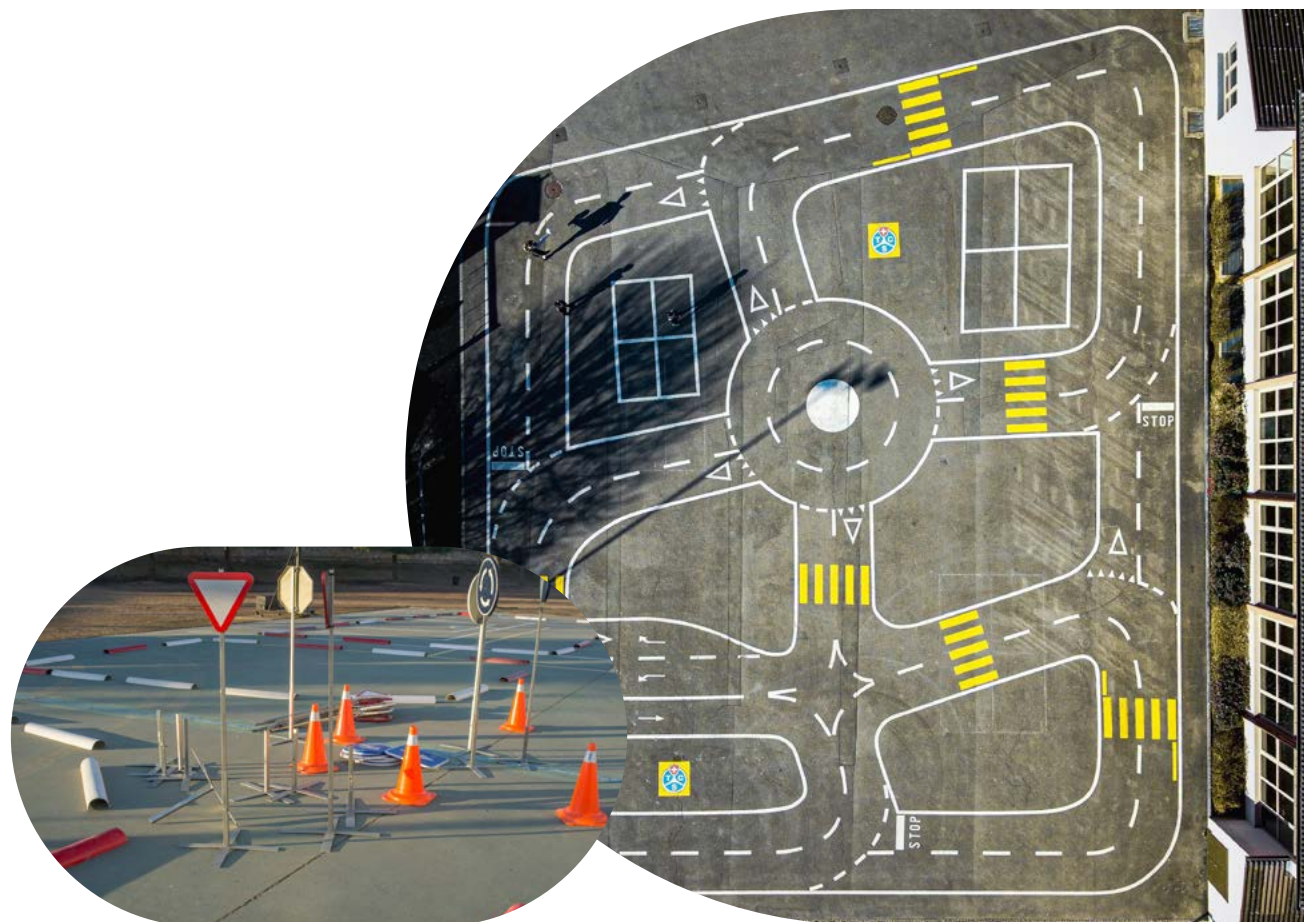
Bike Types

- ⚙ Any Bike



Indicative Budget Estimate (Dec 2021)

€/\$ €/\$ €/\$ €/\$ €/\$



BEGINNER PUMP TRACK



Design Summary

Beginner Pump Tracks are designed for children aged 2 or more riding balance bikes. These tracks, due to their small-sized rollers are perfect for small children enabling them to develop motor coordination as well as balance in a safe environment. They are also suitable for beginner adults and young people on larger bikes, particularly those who've recently learned to ride a bike.

Pump Tracks allow cyclists to learn key balance, pedalling and bike handling skills that can be applied to mountain biking and BMX racing.



Specialist Design Requirement

- ⚙️ Yes



Specialist Construction Requirement

- ⚙️ Yes
- ⚙️ Consideration of access for large construction vehicles



Area Required & Characteristics

- ⚙️ 20x30m
- ⚙️ Minimum rideable length – 50m
- ⚙️ Flat level ground



Potential Location

- ⚙️ Primary school grounds
- ⚙️ Secondary school grounds
- ⚙️ Local park
- ⚙️ Town Park
- ⚙️ Regional Park / Forestry Park
- ⚙️ Sports Centre



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders



Bike Types

- ⚙️ Balance bikes
- ⚙️ Hardtail mountain bikes
- ⚙️ BMX
- ⚙️ Dirt Jump Bike



Indicative Budget Estimate (Dec 2021)

- €1
- €2
- €3
- €4
- €5



INTERMEDIATE PUMP TRACK



Design Summary

Intermediate tracks feature larger obstacles and profiled turns compared to beginner tracks, and form an endless loop. These tracks are still suitable, however, for beginners and children on balance bikes or scooters as well as very experienced riders. Intermediate tracks appeal to a very wide range of riders, and we shape them in such a way that there are progressive ‘double’ features that will only be noticeable to very advanced riders. The use of asphalt surfacing provides a durable, low maintenance surface.



Specialist Design Requirement

- ⚙️ Yes



Specialist Construction Requirement

- ⚙️ Yes
- ⚙️ Consideration of access for large construction vehicles



Area Required & Characteristics

- ⚙️ 60x40m
- ⚙️ Minimum rideable length – 140m
- ⚙️ Flat level ground required



Potential Location

- ⚙️ Secondary school grounds
- ⚙️ Local park
- ⚙️ Town Park
- ⚙️ Regional Park / Forestry Park
- ⚙️ Sports Centre



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders
- ⚙️ Advanced & Expert riders



Bike Types

- ⚙️ Hardtail mountain bikes
- ⚙️ BMX
- ⚙️ Dirt Jump Bike



Indicative Budget Estimate (Dec 2021)

- € / £
- € / £
- € / £
- € / £
- € / £



ADVANCED PUMP TRACK



Design Summary

Advanced Pump Tracks deliver constant excitement to both progressing intermediate and advanced users in the full meaning of this word. They enable bikes to perform jumps smoothly and safely, with large, profiled turns to allow riders to carry speed. Advanced Pump Tracks provide great fun, with multiple line options and can be ridden in various directions.

The surface of the tracks is made from asphalt which allows for not only cycling but also skateboarding and rollerblading.



Specialist Design Requirement

⚙️ Yes



Specialist Construction Requirement

⚙️ Yes ⚙️ Consideration of access for large construction vehicles



Area Required & Characteristics

- ⚙️ 80x50m
- ⚙️ Minimum rideable length – 180m
- ⚙️ Flat level ground required



Potential Location

- ⚙️ Town Park
- ⚙️ Regional Park / Forestry Park
- ⚙️ Sports Centre



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders
- ⚙️ Advanced & Expert riders



Bike Types

- ⚙️ Hardtail mountain bikes
- ⚙️ BMX
- ⚙️ Dirt Jump Bike



Indicative Budget Estimate (Dec 2021)

€/\$ €/\$ €/\$ €/\$ €/\$



MODULAR PUMP TRACK



Design Summary

Modular Pump Tracks are a flexible structure that can be set up, taken away and stored, laid out in different configurations, or expanded with additional sections as required. In many locations, the flexibility of these structures will hold advantages over conventional, permanent Pump Tracks.



Area Required & Characteristics

- ⚙️ 12 x 22m
- ⚙️ Minimum rideable length – 35m
- ⚙️ Requires an area of level ground



Potential Location

- ⚙️ Primary school grounds
- ⚙️ Secondary school grounds



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders
- ⚙️ Advanced & expert riders



Bike Types

- ⚙️ Balance bike
- ⚙️ Hardtail Mountain Bike
- ⚙️ BMX
- ⚙️ Dirt Jump Bike



Indicative Budget Estimate (Dec 2021)

€/\$ €/\$ €/\$ €/\$ €/\$



Image credit : Back on Track



Image credit: Back on Track

BEGINNER MOUNTAIN BIKE SKILLS AREA



Design Summary

An area with short sections of trail, suitable for young riders on balance bikes as well as adults and young people on balance bikes who may be new to riding off-road. A series of rollers are mellow enough for young riders is combined with shallow berms and a winding trail to get novice riders used to riding off road trails.



Specialist Design Requirement

⚙️ Yes



Specialist Construction Requirement

⚙️ Yes



Area Required & Characteristics

- ⚙️ 0.25ha
- ⚙️ Minimum rideable length – 60m
- ⚙️ Level and slightly sloping ground



Potential Location

- ⚙️ Primary school grounds
- ⚙️ Secondary school grounds
- ⚙️ Local park
- ⚙️ Town park
- ⚙️ Regional Parks / Forest Parks
- ⚙️ Sports Centres



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders



Bike Types

- ⚙️ Any bike



Indicative Budget Estimate (Dec 2021)

€ / £ € / £ € / £ € / £ € / £



Afan Forest Park, South Wales
(Image: Back on Track)



Image credit – Back on Track



INTERMEDIATE MOUNTAIN BIKE SKILLS AREA



Design Summary

An area with short, mountain bike trails, of progressive difficulty, from the beginner friendly singletrack, to short trail sections representative of those found at trail centres around the country. Skills areas can help riders develop from having recently learnt to ride a bike through to be ready to ride MTB trail centres with confidence. They are also suitable for riders with experience of riding off road to improve their core skills to take them into the next echelon of riding.



Specialist Design Requirement

- ⚙️ Yes



Specialist Construction Requirement

- ⚙️ Yes



Area Required & Characteristics

- ⚙️ 0.5ha
- ⚙️ Minimum rideable length – 400m
- ⚙️ Sloping ground



Potential Location

- ⚙️ Secondary school grounds
- ⚙️ Local park
- ⚙️ Regional Parks / Forest Parks
- ⚙️ Sports Centres



User Profile

- ⚙️ Older primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders



Bike Types

- ⚙️ Any mountain bike



Indicative Budget Estimate (Dec 2021)

- € / £
- € / £
- € / £
- € / £
- € / £



ADVANCED MOUNTAIN BIKE SKILLS AREA



Design Summary

Short trail sections for advanced riders. The advanced skills areas will generally revolve around trail sections designed to help rider progress their jumping skills. As such, most advanced skills areas will consist of jump lines with progressively harder jumps that should be shaped to be safe, with rider speed controlled through the design of each line.



Specialist Design Requirement

⚙️ Yes



Specialist Construction Requirement

⚙️ Yes ⚙️ Consideration of access for large construction vehicles



Area Required & Characteristics

- ⚙️ 1.25 ha
- ⚙️ Minimum rideable length – 1,200m
- ⚙️ Sloping ground



Potential Location

- ⚙️ Regional Parks / Forest Parks
- ⚙️ Sports Centres



User Profile

- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Progressing intermediate riders
- ⚙️ Advanced & expert riders



Bike Types

- ⚙️ Mountain Bike



Indicative Budget Estimate (Dec 2021)

€ / £ € / £ € / £ € / £ € / £



Glencullen Adventure Park, Dublin - The Advanced skills area consists of 3 jump lines; Blue, Red and Black grade lines, designed to allow riders to advance their jumping skills

BMX TRACK



Design Summary

BMX racing offers a progression pathway from pump tracks and MTB skills area for riders. Racing takes place on purpose-built single lap tracks typically built from compacted dirt and asphalt. Tracks feature a large starting ramp, banked corners and a variety of jumps including tabletops, gap jumps and rhythm sections.



Specialist Design Requirement

⚙️ Yes



Specialist Construction Requirement

⚙️ Yes ⚙️ Consideration of access for large construction vehicles



Area Required & Characteristics

⚙️ 0.65 ha ⚙️ Flat level ground
⚙️ Minimum rideable length – 350m



Potential Location

⚙️ Sports centre / complex
⚙️ Regional Park



User Profile

⚙️ Intermediate BMX Racers
⚙️ Advanced BMX Racers



Bike Types

⚙️ BMX



Indicative Budget Estimate

€/\$ €/\$ €/\$ €/\$ €/\$



Other Considerations

The use of asphalt surfacing on elements of a track reduces maintenance obligations. Consideration should be given to user amenities including car parking, changing rooms and toilet facilities.

BMX Ireland have extensive experience in the design and specification of tracks and can be contacted via www.bmxireland.ie to discuss any potential developments.



GRASS TRACK



Design Summary

Grass track racing provides an entry level introduction to racing or race training with a sports pitch or flat field providing a suitable surface. Cycling Ireland is developing a Guide for Grass Track Racing details of which may be found at www.cyclingireland.ie



Area Required & Characteristics

A grass track may typically consist of a 300m lap marked out with cones or other markers, as shown. The outside of the track may be marked for the benefit of segregating participants and spectators.



Potential Location

Pitches or flat, grassed areas in

- ⚙️ Town park
- ⚙️ Regional park
- ⚙️ Sports centre / complex
- ⚙️ Sports club facilities



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders
- ⚙️ Advanced & expert riders



Bike Types

- ⚙️ Any bike



Indicative Budget Estimate

- ⚙️ Minimal outlay – equipment only



Other considerations

Grass Tracks require minimal set-up and cost however consideration should be given to any equipment storage locations and transportation to and from events.



Image credit - Irish Cycling

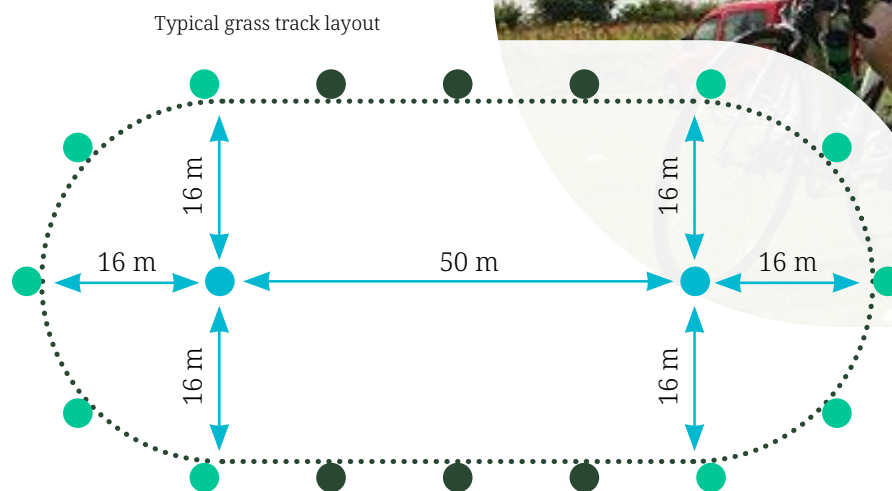


image credit - Ulster Cycling News



LOCAL TRAIL CENTRE



Design Summary

These are similar to larger national trail centres found on the Coillte estate but scaled down to fit smaller areas. Potential locations could include disused golf courses, woodlands, larger town parks or sports centers areas of sloping ground within their curtilage.

Local Trail Centres would ideally be constructed with skills areas within the same site, and would consist of singletrack mountain bike trails, with a single direction of travel, that start and finish in the same location.



Specialist Design Requirement

⚙️ Yes



Specialist Construction Requirement

⚙️ Yes



Area Required & Characteristics

- ⚙️ 3 ha
- ⚙️ Minimum rideable length – 2,000m
- ⚙️ Sloping ground required



Potential Location

- ⚙️ Town Park
- ⚙️ Regional Park / Forestry Park
- ⚙️ Disused golf courses



User Profile

- ⚙️ Primary school age children
- ⚙️ Secondary school age children
- ⚙️ Adults
- ⚙️ Beginners
- ⚙️ Intermediate riders
- ⚙️ Advanced & expert riders



Bike Types

- ⚙️ Mountain Bike



Indicative Budget Estimate (Dec 2021)

€1/£ €1/£ €1/£ €1/£ €1/£



Image : Nuneaton & Bedworth Borough Council



ROAD BIKE CYCLE CIRCUIT



Design Summary

A cycle circuit comprises an asphalt surfaced track, accessible for all and suitable for all abilities of cyclist from those looking to increase cycling confidence to hosting competitions and events.

Tracks are typically 1 to 1.5km in length incorporating a number of loops facilitating shorter laps.

Due to their length, circuits are typically located at larger venues. Examples include Corkagh Park in Dublin, Northern Gateway Sports Park Colchester and the in development West Lothian Cycle Circuit.



Area Required & Characteristics

- ⚙ 3 ha
- ⚙ Minimum rideable length – 1,000m
- ⚙ Level or sloping ground



Potential Location

- ⚙ Regional Park
- ⚙ Sports Centre



User Profile

- ⚙ Primary school age children
- ⚙ Secondary school age children
- ⚙ Adults
- ⚙ Beginners
- ⚙ Intermediate riders
- ⚙ Advanced & expert riders



Bike Types

- ⚙ Road bikes



Indicative Budget Estimate (Dec 2021)

- ⚙ Capital Investment Project



Other Considerations

With the scale and level of investment required to establish a cycle circuit consideration should be given to the range of other cycling facilities that could be accommodated on the site to establish a fully inclusive cycling centre.



Image : Colchester Borough Council



SECTION 3

Cycling Hub DEVELOPMENT CHECKLIST

PHASE 1 · CYCLING HUB PROJECT INITIATION

KEY STEPS

FOR CONSIDERATION

PROJECT VISION

Define a vision for the cycling hub – what do you want it to achieve?

Does it adhere to the guiding principles outlined for cycling hubs to ensure participation, inclusion, community and physical activity benefits.

Identify and engage with potential stakeholders

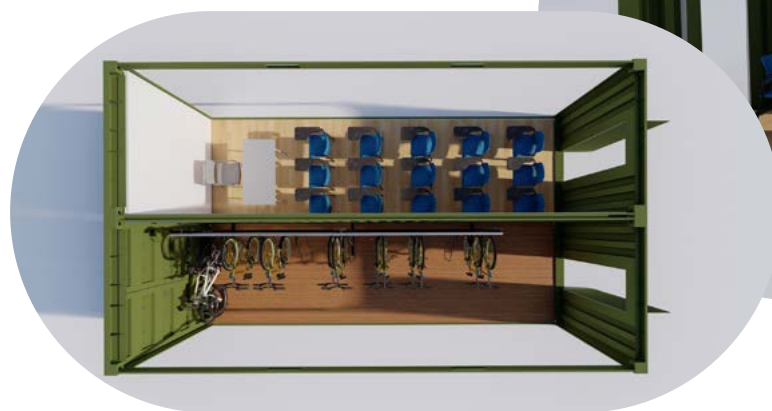
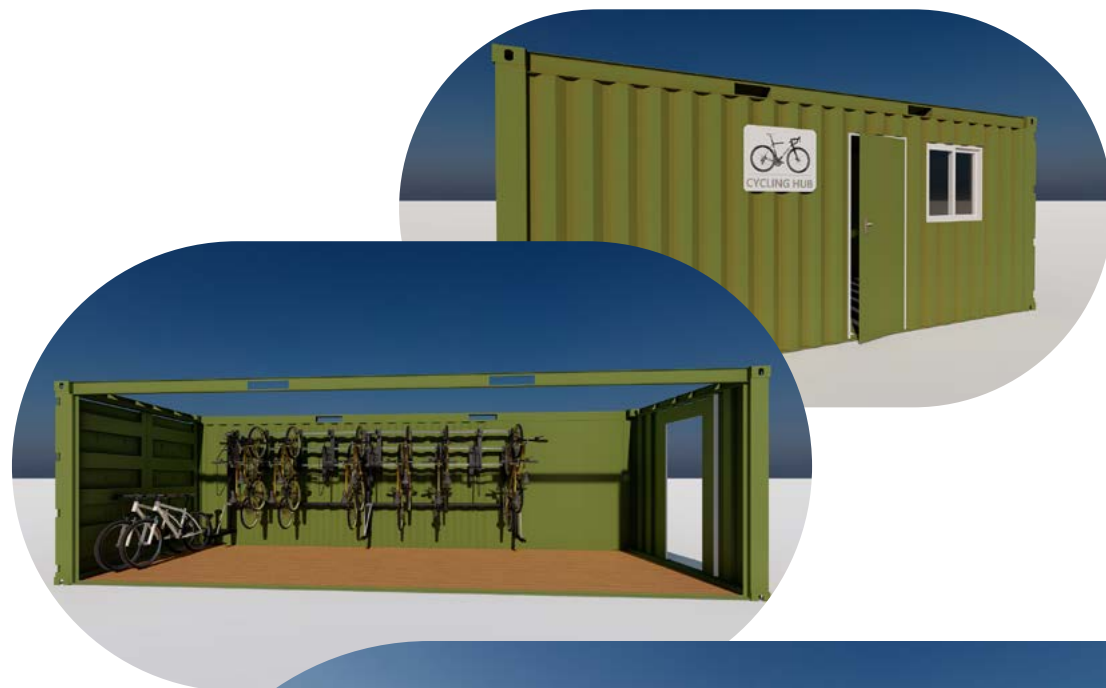
- Local Authority
- Local Sports Partnerships
- User groups
- Clubs and associations
- Landowners (Privately owned / public body)

SET GOALS

Having consulted with stakeholders and identified the needs and possible barriers, you should now be able to define the goals of your project and prepare a preliminary business plan.

Funding Potential

Review funding opportunities that may exist.



PHASE 2 · CYCLING HUB PLANNING

KEY STEPS	FOR CONSIDERATION
Data review	Collate all the information you have gathered to date.
Location considerations	<p>Where is the cycling hub going to be?</p> <ul style="list-style-type: none"> ▪ Is there only one suitable option or are more potential locations available? ▪ Are potential cycling hub locations accessible for cyclists, cars and public transport (including those with a disability)? ▪ Are potential cycling hub locations in proximity to nearby complementing facilities and amenities that you could link with? ▪ What size, shape and general topography are the potential cycling hub locations? ▪ Do locations present opportunities for future expansion? ▪ Are services and utilities available? (e.g. electricity supply, water) ▪ Are there any access issues that may affect construction works? e.g. narrow access routes, environmental considerations ▪ Is the site in an open and inviting setting? ▪ Will the hub be accessible 24/7 or is a secure location preferred? ▪ Is lighting required to encourage year-round use?
Location Selection	Undertaking analysis of the Strengths, Weaknesses and future Opportunities for each location would be useful.
Identify Hub Level Required	<p>Will sports programming be delivered at the hub?</p> <ul style="list-style-type: none"> ▪ What public user groups you are trying to facilitate? (e.g. young children and families, young adults) ▪ Are storage facilities available for delivery of programmes? ▪ Will any other clubs or organisations be accommodated? ▪ Are there any existing premises/building available for reuse as hub space? ▪ Is the location suitable for delivery and siting of a container-type hub space?
Cycling Hub Preferred Option	<ul style="list-style-type: none"> ▪ Discuss with Local Authority any planning and/or environmental considerations to be fulfilled as part of the cycling hub works. ▪ Confirm preferred location and hub level for progression
Funding	Progress funding opportunities for design and construction of cycling hub

PHASE 3 · CYCLING HUB DEVELOPMENT

KEY STEPS	FOR CONSIDERATION
KPIs	<p>Identify Key Performance Indicators that may be measured to determine the future success of the project, including any features that may be incorporated at design / construction stage, e.g.</p> <ul style="list-style-type: none"> ▪ track/trail counters ▪ number of cycling programming delivered ▪ number of participants in courses ▪ number of community groups availing of programmes ▪ range of programmes delivered ▪ damage and maintenance of equipment / facilities
Hub Space Facility	<ul style="list-style-type: none"> ▪ Prepare specification for cycling classroom cabin and/or cycling storage cabin. ▪ Identify potential suppliers cycling cabins – ensure sufficient quotes are obtained to meet any funding requirements.
Repurposed Space Facility	<p>Identify the scope of works required to provide for intended storage and/or classroom hub. Obtain quotes for the works required.</p>
Specialist input	<ul style="list-style-type: none"> ▪ Will the proposed cycling facilities identified require specialist design input? ▪ Where specialist track/trail designers and builders are required, seek evidence of appropriate experience and references for projects completed.
Procurement Options	<p>Where specialist input is required for cycling facilities, consider a procurement process:</p> <p><u>Option 1 – Design & Build</u></p> <p>In this option you will appoint a contractor who has an in-house Pump Track/trail designer or may be a Pump Track/trail designer themselves.</p> <p><u>Option 2 – Traditional contract route</u></p> <p>You appoint a Pump Track/trail designer to design and manage the contract on your behalf. The designer will support you to employ a separate contractor who will then build their design.</p> <p>A summary of benefits and considerations for both options is provided hereafter.</p>
Procurement Options	<p>Where specialist input is not required for cycling facilities progress with design and procurement using in-house resources.</p>
Prepare Agreements with Other Stakeholders	<p>Agree future responsibilities and actions in Memorandum of Understanding with relevant third parties for co-shared cycling hubs and standalone cycling hubs e.g.</p> <ul style="list-style-type: none"> ▪ Agreement for siting on parties' land (e.g. private owner, local authority, Dept of Education) ▪ Confirmation of future ownership of facilities ▪ Insurance obligations ▪ Responsibility for and ongoing payment of any services (electricity, water) supplies ▪ Maintenance and upkeep <p>Agreed usage by other groups / clubs</p>
Prepare Cycling Hub Operation Procedures	<p>Develop any policies and procedures required for the usage of facilities for co-shared cycling hubs and standalone cycling hubs e.g</p> <ul style="list-style-type: none"> ▪ Agree facility manager ▪ Booking procedures for sports programmes and user groups ▪ Agree keyholders and access times ▪ Signing in/out of bikes and equipment ▪ Damage and fault reporting



PHASE 4 · CYCLING HUB SUSTAINABILITY

KEY STEPS	FOR CONSIDERATION
Implement Operating Procedures	Implement operating procedures and review / amend as necessary
KPI Measurement	Review hub performance against agreed KPIs
Maintenance Costs	Monitor ongoing maintenance costs and replacement programme for bikes and equipment
Future Opportunities	Review and identify opportunities for expansion of hub or development of activity that will sustain the cycling hub



Cycling Hub Development – Summary of Procurement Options

It is advised that you engage a specialists Pump Track / Trail designer and builders for your project. When selecting your specialist Pump Track/ Trail designers and/or builders, you should always check for evidence of past experience in similar cycling facility projects. Always look for client references for projects they have completed. You should always contact the references provided and learn from their experience.

OPTION 1: Design & build contract route

This option will see you employ a contractor to build the job who will have an in-house designer or partnership with a designer.



POSITIVES

- The client will have security over the overall project cost, should issues arise during construction the contractor is still required to deliver as per the contract.
- Two tenders will be required in total - one for the feasibility/outline design, (which you've already done by this stage) one tender that includes construction design work as well as construction contract.
- Only one point of contact for the client.



CONSIDERATIONS

- Much as the trail designers will be keen to deliver a quality product for their own reputation they will not be working on your behalf. They will be focused on bringing the project in on time and budget therefore a common negative of a design and build contract is that the quality may suffer.
- Funding for the full contract must be in place before the detailed design is developed.
- The client won't know exactly what they're getting at the point they let the contract

OPTION 2: Traditional contract route

This option will see you employ a trail designer to design the trail and thereafter support you to select a contractor by tendering and then manage the construction contract on your behalf.



POSITIVES

- The designer will be working on your behalf this ensures quality of the finished product.
- Construction design can be developed before you have the funds in place to build the project, this ensures that clients 'know what they're getting' prior to letting the contract.
- Fundraising can continue alongside the design development.



CONSIDERATIONS

- As a client you have less control over the final cost, if issues arise during construction then the project will need to be redesigned or reduce the scope of the project to maintain the price. Alternatively additional funds may be found to resolve issues.
- Three tenders will be required in total - one for the feasibility/outline design, (which you've already done by this stage) - one for the construction design work (although you may continue with the feasibility designer)- one for the construction contract.

SECTION 4

Learning from Best Practice

Collinstown, South Dublin

South Dublin County Sports Partnership are delivering a cycling hub, comprising storage container facilities, in the grounds of the Collinstown Park Community College for the storage of bikes, programme equipment and delivery of bike maintenance programming.



OBJECTIVE

This co-shared amenity will enable the delivery of cycling programmes to the local community. The school is a well known feature of the local area and in proximity to organisations and groups who can support participation in outreach programmes to the community.

The CSP have rented a dedicated training room from the school which together with the sports hall and playground provide on-site training facilities. A recently built 'Teen Space' including pump track in the adjacent public park developed in consultation with local school children offers an additional cycling facility.



KEY STEPS

The CSP approached the school, making funding available to the school for the purchase of a 20ft container. Delivery of the container took approximately nine months.

An agreement is in place between the local Education Training Board and the LSP for the use of school grounds with insurance cover provided by the local authority. Policies and procedures have been developed for booking and signing in/out of equipment, with responsibilities being allocated on user group Ride Leaders to

reduce day-to-day management input.



OUTCOMES

Programme being pursued include:

- Teen/youth programmes using the pump track to develop experience and skills before taking groups out to trail centres
- Women's recreational cycling programme
- Leadership programme with CI in development working with two schools
- Development of a QQI Level4 bike maintenance programme in conjunction with local bike shop designed to target getting men active.



KEY LEARNINGS

ETB's were noted as offering a good target partner with the potential to link with training programmes and cover tutor costs.

Provision of the hub is also enabling the LSP to seek funding for bike purchases from other groups and organisations.

During the pandemic the cost of a basic container doubled in price. Further pandemic issues around the availability of bikes for bulk purchase, with the purchase of small number of bikes from several sellers not appropriate to procurement requirements were noted.



Fermanagh, Omagh & Downpatrick; Northern Ireland

Cycling Ireland Ulster has recently opened standalone hubs featuring classroom and storage space at three locations in Northern Ireland.



OBJECTIVE

The objective of the hubs is to provide for the delivery of coach education programmes, participation programmes, partnership activities including bike maintenance and bike safety initiatives. The hubs will provide a venue for Cycling Ireland and local clubs that can be used free of charge.

Two of the hubs are located in the carparks of existing local authority sports and leisure centres, providing surfaced areas for training and access to the road network for group cycles. The third hub is based at a former equestrian centre, with the potential future opportunity to create cross-country cycling route at the hub.

Each hub includes a converted 20x10ft shipping container fitted out for classroom training with a second container providing storage facilities and opportunity for future maintenance classes. The exterior of containers will be branded for a uniform approach.



KEY STEPS

Cycling Ireland identified multi-disciplinary sports centres as preferred locations for the hubs, with all locations offering access to electricity supplies and toilet provision.

CI entered into memorandums of agreement with the relevant local authority in respect of issues including future asset ownership, maintenance, services costs and insurance. A rental/lease agreement was agreed with the landowner of the equestrian centre based hub.



OUTCOMES

An online portal was launched in November 2021 for booking hub space, with programme delivery due to increase from early 2022.

It is anticipated that the hubs may be utilised to develop training pods for elite development squads, while through collaboration with the local authority hubs may also be used by other sports.



KEY LEARNINGS

With plans for a second tranche of hubs progressing, the increasing costs of containers resulted in the use of smaller storage containers to meet agreed budgets.



Downpatrick cycling hub, Nov 2021
(Storage and classroom awaiting branding)

Nottingham – Victoria Embankment Children’s Cycle Park



Nottingham City Council installed a junior bike track in a recreational park in the city.

With a footprint of approximately 2,500 sqm, the park provides families with a vehicle-free environment to help young riders with riding skills, etiquette and road safety utilising a design incorporating junctions and road markings, pedestrian crossings and traffic lights

Similar cycling facilities can be found in a number of cities around the world, including the Children’s Traffic Playground in Copenhagen. The Copenhagen facility is operated with scheduled opening hours, providing bikes and helmets free of charge to young children. The facility also allows users to bring their own bikes and includes an open maintenance workshop for cyclists to learn repair skills.

Inverness Pump Track

The Inverness pump track was developed by a local charitable organisation with funding received from a number of bodies including Sport Scotland.

The pump track is located at the core of the city’s main sports and recreation infrastructure with existing nearby facilities including a skatepark, leisure centre, ice rink, athletics track and sports pitches.

The 240m long track incorporates a beginner loop and children’s track and is floodlit to accommodate evening use.



Nowy Sacz – Poland

The Pump track venue in Nowy Sacz was developed by the local authority to expand upon the range of sports and recreation facilities in the city. It is located in a park adjacent to existing sports facilities.

The venue covers a footprint of approximately 0.6 hectares, split over four distinct zones each catering for a specific level of ability from young children to expert riders. The venue incorporates all 3 Pump track types within one facility and is further noted for the provision of one track intended as a training location for potential Olympic BMX competitors. Further amenities provided at the site include floodlighting, carparking, orientation signage and range of street furniture.



Harrow Pump Track – Programme Delivery



This new track in Harrow, London provides pump track loops for beginner, intermediate and experienced riders and includes a starting gate feature for BMX racers.

The track is a collaboration between the local authority, British Cycling's 'Places to Ride' programme, and the Access Sport organisation which aims to provide inclusive access to sport and physical activity.

In addition to the track being publicly accessible, Access Sport's involvement with the project has seen the establishment of a new community cycling club based at the track. The club delivers a range of cycling programmes to the community including school outreach, Women's BMX exercise classes, family sessions and the Wingz disability cycling initiative.

Wals-Siezenheim, Austria



The Wals-Siezenheim Pump Track provides a 900sq m track suitable for all levels of rider. It was developed adjacent to an existing adventure playground enhancing regional recreational facilities.

In developing the facility, the local authority had recognised that the target audience was older children and young adults who used bikes, skateboards, skates and scooters.

The track features a notable design of two mirrored pump tracks enabling riders to compete against each other on a loop of the track.

The local authority estimated that more than one million laps of the track had been completed in two years after opening.

Cycling Hub Social Enterprise - Auckland New Zealand

EcoMatters operates a network of three cycling hubs in West Auckland, New Zealand. It is a charity working with and for the community to deliver environmental initiatives around nature, food growth, waste reduction, riding and fixing bikes, and living more sustainably.

Through its cycling and sustainability focus the charity is supported by the local authority, transport authority, regeneration boards, lottery grants and corporate sponsorship.

Bike Hubs run by EcoMatters are established in shipping containers with additional temporary/pop-up facilities offering

- free access to tools and advice on basic bike maintenance
- restored and safety-checked second-hand bikes for sale
- used and new bike parts and accessories
- safe cycling advice and guidance
- novelty bikes to try
- free cycling maps,
- weekly guided bike rides at Henderson and Glen Innes



SECTION 5

Cycling Hub Innovation

OVERVIEW

The programme of consultation and research identified a number of opportunities for cycling hub stakeholders to consider in applying a level of innovation to the sites. The suggestions are designed to enhance the user experience and widen the appeal of the hub to other cyclists across the community.

Installation of associated cycling amenities and infrastructure

The installation of supplementary infrastructure including public bike pump and repairs stands will enhance the cycling hub, serving both programme and recreational users of the cycling hub. These facilities will also be of benefit to any cycling clubs that adopt the hub as their base. Further facilities for consideration include wall-mounted inner tube vending machines, aiding riders to repair punctures while at the hub.

Development and installation of QR code training guides

In recent years the use of QR code has been an increasing feature at un-staffed heritage sites and trails, enabling visitors to gain further insight and interpretation of a site.

The development of a QR code training guide delivers an opportunity to enhance the usage of hub facilities outside of sports programming.

Short video clips could be delivered via QR code installed at a learn to ride facility to assist parents in teaching children to ride. QR code could also be considered at pump tracks and MTB skills areas featuring new skills and techniques for riders to try, developing skillset and rider progression.

Creation of cycling-related social enterprise

Successful development of a cycling hub may provide the opportunity to establish a cycling-related social enterprise at the hub widening the attraction of the hub and daily hours of activity. Similar enterprises are in operation at various locations globally with programmes and revenue opportunities around the circular economy including

- Public donation of used and outgrown bike
- Sale of reconditioned, donated bikes
- Maintenance and repairs service
- Sale of reconditioned second hand bikes
- Donation of reconditioned bikes to vulnerable community groups



Image: Audio Trails UK



Community Bike Hub Inc, Melbourne



Image UCD Estates

APPLYING INNOVATION

Opportunities for development of public bike rental locations

Consultation identified existing challenges relating to access to bikes for some members of the community outside of participation in sports programming. Cycling hubs may offer the opportunity to establish future rental locations enabling increased wider access and usage through a hub with bikes available appropriate to the hub's cycling facilities. Bike rental schemes are regularly available at unstaffed locations with bikes accessed via QR code / phone app based secure locking system.

Monitoring of hub usage

Installation of bike counters into pump tracks and skills areas may be of benefit in monitoring usage of these facilities as evidence of a hub's success against KPIs, recording the number of laps or loops completed by riders over a period of time. Similar counters have been installed at pump tracks and trails enabling monthly and annual comparisons to be delivered.

