

AtkinsRéalis



**Greater Cambridge
Planning Obligations
SPD Costing Update**

Greater Cambridge Shared Planning Services

2nd July 2025

**INFRASTRUCTURE COSTING
REVIEW – GREATER
CAMBRIDGE PLANNING
OBLIGATIONS SPD**

Notice

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This document has 30 pages including the cover.

Document history

Document title: Infrastructure Costing Review – Greater Cambridge Planning Obligations SPD & Infrastructure Delivery Plans

Document reference: 5

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft report	PP/HL	CGL	CGL	VD	03/10/2024
2.0	Final report	PP/MP	SL	CGL	MG	20/11/2024
3.0	Revision as per Client review comments	PP	SL, CGL	CGL	MG	31/01/2025
4.1	Revision as per Client review comments	PP/SL	CGL	CGL	MG	19/03/2025
5.0	Revision as per Client review comments	SL	CGL	CGL	MG	04/04/2025
6.0	Revision as per Client review comments	SL	PP	PP	CGL	02/07/2025



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1. Introduction

AtkinsRéalis, in collaboration with the Land Use Consultants (LUC), were appointed by the Greater Cambridge Shared Planning Service (GCSPS) to review the infrastructure required to support planned growth in North East Cambridge (NEC) and to prepare an IDP in support of the emerging Greater Cambridge Local Plan

As part of this commission, AtkinsRéalis reviewed specific infrastructure costs that could also be used by the GCSPS in the Greater Cambridge Planning Obligations SPD. This report provided an update on the developer contributions costs included within the Cambridge City Council (CCC) Planning Obligations Strategy Supplementary Planning Document (SPD) (March 2010, updated 2023) and the approaches used by South Cambridgeshire District Council (SCDC), including the Open Space in New Developments SPD (2009).

The main task of this commission was to update the costing needed for the following infrastructure typologies:

- Built facilities, including community buildings, indoor sports and leisure facilities, including swimming pools.
- Green infrastructure and open spaces, such as outdoor sports areas, play spaces for children and young people, and informal open spaces like allotments and community orchards.

Different cost estimation approaches were used for each facility/typology, which are explained in the respective sections. Additionally, high-level life cycle maintenance costing was undertaken for built facilities based on Building Cost Information Service (BCIS) benchmarks. These should be considered high-level estimates for budgetary purposes only. The costings are based on data from Q3 2024.

The methodology employed for this update includes a review of relevant 2018 Local Plan policies, which often differ between South Cambridgeshire and Cambridge City in both the form of provision and overall quantum. The report provides an update to the open space developer contributions costs included within the SCDC Open Space in New Developments SPD (2009) and the 'Development of a Recreation Policy for South Cambridgeshire District Council' evidence base (2005). Additionally, the Cambridge City Council Green Infrastructure and Open Space costs are set out per person, based on the CCC Open Space standards.

2. Green Infrastructure and Open Space

Cambridge City Council Green Infrastructure and Open Space

The following costs are set out per person, based on the CCC Open Space standards:

- Outdoor Sports Facilities: 1.2 hectares (ha) per 1,000 people
- Provision for Children and Teenagers: 0.3ha per 1,000 people
- Informal Open Space: 1.8ha per 1,000 people
- Allotments: 0.4ha per 1,000 people

Table 2.1 provides an update to Table 3 within the currently adopted SPD (summary of all Open Space contributions).

Table 2.2 to Table 2.6 provide an update to Tables B1 to B5 within the currently adopted SPD (showing costed items per typology).

Table 2.1 – Summary of Open Space cost contributions

Type of Open Space	Standard	Provision £ per person	15-year maintenance per person	Total per person
Outdoor Sports	1.2 ha per 1,000	£362.70	£565.27	£927.97
Provision for Children and Teenagers	0.3 ha per 1,000	£434.98	£456.73	£891.71
Informal Open Space	1.8 ha per 1,000	£357.54	£177.62	£535.15
Allotments	0.4 ha per 1,000	£51.29	£27.20	£78.49

Outdoor Sports

Capital (provision) costs for Outdoors Sports are derived from Sport England facility cost guidance (Q3 2024). The maintenance costs for Outdoor Sports have been informed by Sport England lifecycle cost guidance. The maintenance costs are derived from an annual percentage allowance of the capital costs. These costs are comprised of the following:

- Maintenance: day to day repairs and planned preventative maintenance (mowing, scarification, line marking, rolling, top dressing etc.)
- Sinking fund: major replacement costs, replacement of equipment (goals etc.), replacement / renovation of drainage features (sand slits / grooves / drains or similar).

Sport England sets out the following maintenance and sinking fund annual percentage allowances:

- Football: maintenance (16.5%), sinking fund (3.2%)
- Cricket: maintenance (15%), sinking fund (3.4%)
- Rugby: maintenance (14.9%), sinking fund (3.6%)



- ATP: maintenance (0.5%), sinking fund (2.5%)
- Tennis: maintenance (0.4%), sinking fund (1.2%)
- Bowling: maintenance (6.3%)

Table 2.2 highlights the capital (provision) costs for outdoor sports per sport type. Table 2.3 shows maintenance costs per sport type. Costs per person have been derived from the information provided in the SPD (catchment population per sport type).

Table 2.2 – Provision of Outdoor Sports

Sport	Cost of pitch	Catchment population	Cost/Person
Football	£110,000	1,026	£131.50
Cricket	£71,000	11,580	£23.72
Rugby	£170,000	12,580	£15.53
ATP	£1,300,000	25,170	£51.65
Tennis	£127,500.00	1,000	£124.39
Bowling	£175,000	11,000	£15.91
Total cost per person			£362.70

Table 2.3 – Maintenance of Outdoor Sports

Sport	Cost of 15-year maintenance of pitch/court	Catchment population	Cost/Person
Football	£325,050	1,026	£388.57
Cricket	£195,960	11,580	£65.48
Rugby	£471,750	12,580	£43.09
ATP	£585,000	25,170	£23.24
Tennis	£30,600	1,000	£29.85
Bowling	£165,375	11,000	£15.03
Total cost per person			£565.27

Please note there are differences in the way that outdoor sport facility costs are calculated in the Cambridge City Council and South Cambridgeshire District Council areas. The approach used in Cambridge reflects Cambridge Open Space and Recreation Strategy (2011) which sets out the catchment population (shown in Table 2.2 and Table 2.3) and provision of pitch type per 1,000 people (Football senior pitch – 0.887 ha per 1,000 people, Cricket – 0.138 ha per 1,000 people, Rugby – 0.095 ha per 1,000 people, ATP – 0.295 ha per 1,000 people, Tennis – 0.060 ha per 1,000 people and



bowling – 0.015 ha per 1,000 people). The cost per pitch has been defined from the Sport England facility cost guidance, as set out above.

The approach used in South Cambridgeshire reflects that of the Open Space in New Developments SPD (2009) and The Development of a Recreation Policy for South Cambridgeshire District Council (2005).

A comparison of the costs for sports pitch provision will highlight differences in the expected costs per person in Cambridge (see Table 2.2) and South Cambridgeshire (see Table 2.8). The reason for the differences arises because each council has a different expectation of the facilities to be provided. Importantly, the South Cambridgeshire methodology includes the cost of changing pavilions, parking and multi-use games areas within the outdoor sports pitch facilities which are expected to be funded by planning obligations. These additional items result in higher costs in South Cambridgeshire compared to Cambridge.



Provision for Children and Teenagers

Table 2.4 provides an update to Table B3 within the SPD; capital (provision) and maintenance costs for Provision for Children and Teenagers. Costs are derived from Spon's Landscape Price Book (2024), unit rates for play equipment have been rounded up. Percentage allowances have been added for external works (15%), contingency/preliminaries (12%) and fees (5%).

The costs below are for a 0.3ha (3,000 m²) area comprised of the following:

- Equipped play facilities (Neighbourhood Equipped Area for Play - NEAP) (assume 1,000 m²) with allowance for:
 - Eight items of play equipment's;
 - Allowance for natural play features (e.g. climbing logs, mounds etc.);
 - Safety surfacing;
 - Boundary fence, 3 gates;
 - Cycle rack;
 - Bins signage;
 - Basketball half court (350 m² including surrounds);
 - Youth shelter area (50m² including surrounds);
 - Bench;
 - Areas for informal play (e.g. social play or kick about) (1600 m²)

Maintenance costs are a combination of maintenance unit rates (Spon's, 2024) and annual percentage allowance replacement / repair costs:

- NEAP equipped play: 10% of capital cost per annum lifetime replacement cost. Allowance for annual independent safety inspection.
- Basketball & youth shelter: 2% of capital cost per annum lifetime replacement cost plus litter picks at £129.50 per year.
- Kick about area: grass cutting and strimming operations.

The costs below are for an example 0.3ha site. The quantity standard for provision for children and teenagers is 0.3ha per 1,000 people. Per person costs have been derived by dividing the overall cost of the example 0.3ha site by 1,000.

Table 2.4 – Provision for Children and Teenagers, cost of provision and maintenance (example 0.3 ha area)

Facility	Area (m ²)	Provision	15-year maintenance
NEAP (1,000m ²)	1000	£265,800.00	£423,450.00
Basketball half court (350m ²)	350	£34,550.00	£12,307.50
Youth shelter zone (50m ²)	50	£12,000.00	£3,600.00
Bench	n/a	£1,500.00	£2,250.00
Kickabout area (1600m ²)	1600	£15,680.00	£15,120.00



Total (provision including 15% external works, 12% contingency/prelims, 5% fees)	£434,979.00	£456,727.50
Total per person (0.3 ha per 1,000 standard)	£434.98	£456.73

Informal Open Space

Table 2.5 provides an update to Table B4 within the SPD. Capital (provision) and maintenance costs are derived from Spon's Landscape Price Book 2024. Unit rates for individual features have been rounded up where appropriate. Percentage allowances have been added for contingency/prelims (12%) and fees (5%).

Maintenance costs allow for the following:

- Grassland / pasture: cut grass (flail) (1 x per annum);
- Mown grass: cut grass and strim (10 x per annum);
- Shrub: allowance for weeding (2 x per annum) and annual pruning;
- Woodland: provision annual sum allowance for general maintenance, tree replacement, removal of tree protection (potential for variation in year-on-year maintenance);
- Park trees: weed and top up mulch;
- Hedgerow: weed / clear base, annual cut;
- Pond: remove leaves / debris;
- Bench, bins and interpretation board: cleanse;
- Paths: weed control and 2% of capital cost annual lifetime repair cost.

Costs have been developed for an example 1 ha site. The quantity standard for informal Open Space is 1.8 ha per 1,000. Per person costs have been derived by applying a 1.8 multiplier and then dividing the overall estimated cost for a 1.8 ha site by 1,000.

Table 2.5 – Informal Open Space (example 1ha site)

Facility	Provision	15-year maintenance
Grassland/pasture (44% of area)	£16,720	£3,300.00
Mown grass (25% of area)	£8,750	£15,825.00
Shrub (6% of area)	£10,230	£3,510.00
Woodland (25% of area)	£13,250	£30,000.00
20 Park trees	£5,000	£3,000.00
Hedgerow 350 lin. m	£6,720	£6,200.00
Pond	£7,500	£4,500.00
5 Benches	£7,500	£1,500.00
Paths for cyclists and pedestrians (macadam, 2m wide) 300m	£34,500	£10,980.00



Facility	Provision	15-year maintenance
Footpath (macadam, 1.5m wide) 600m	£54,600	£17,460
Interpretation Board	£1,800	£600
4 Bins	£3,200	£1,800
Total (provision including 12% contingency/prelims, 5% fees)	£198,631	£98,675
Total per person (at 1.8 ha per 1,000 standard)	£357.54	£177.62

Allotments

Table 2.6 provides an update to Table B5 within the SPD. Costs have been derived from Spon's Landscape Price Book (2024). Unit rates for features have been rounded where appropriate. Percentage allowances have been added for contingency/prelims (12%) and fees (5%). Maintenance cost estimates allow for the following:

- Hard landscape and infrastructure/facilities: 2% of capital cost per annum replacement/repair cost.
- Boundary vegetation: allowance for annual cutting
- Boundary grass and grass access paths: cutting and strimming operations (6 x per year)

Costs have been developed for an example 1 ha site. The quantity standard for allotments is 0.4 ha per 1,000 people. Per-person costs have been derived by applying a 0.4 multiplier to the costs for 1 ha and dividing this figure by 1,000.

Table 2.6 – Update to Table B5: Allotments (example 1 ha site)

Facility	Provision	15-year maintenance
Hard standing (400m ²)	£36,000.00	£10,800.00
Water connections/water points (assume 20 standpipes)	£15,855.00	£11,891.00
Fencing (1.8m high, 500m)	£41,500.00	£12,450.00
Vehicle access gate	£1,000.00	£300.00
Soil preparation/decompaction	£4,222.00	n/a
Marginal areas/boundary planting 1m width	£5,757.00	£10,260.00
Marginal areas seeding and grass access paths	£5,250.00	£22,302.00
Total (provision incl. 12% contingency/prelims, 5% fees)	£128,213.00	£27,201.00
Total per person (at 0.4ha per 1,000 standard)	£51.29	£27.20

South Cambridgeshire District Council Green Infrastructure and Open Space

The following section provides an update to the open space developer contributions costs included within SCDC Open Space in New Developments SPD (2009) and the 'Development of a recreation policy for South Cambridgeshire District Council' evidence base (2005)'.

Costs are set out per person, based on the SCDC open space standards:

- Outdoor Sports Facilities: 1.6 hectares (ha) per 1,000 people
- Children's Play Space: 0.8 ha per 1,000 people (50% formal, 50% informal)
- Allotments and community orchards: 0.4 ha per 1,000 people

Costs have been derived from Spens Landscape Price Book (2024). Unit rates for features have been rounded where appropriate. Percentage allowances have been added for contingency/prelims (12%) and fees (5%). Maintenance cost estimates for informal open space, allotments, and children's play provision allow for the following:

- Hard landscape and infrastructure/facilities: 2% of capital cost per annum replacement/repair cost.
- Boundary vegetation: allowance for annual cutting
- Boundary grass and grass access paths: cutting and strimming operations (6 x per year)

Costs have been developed for an example 1ha site. The quantity standard for allotments and community orchards is 0.4ha per 1,000 people. Per-person costs have been derived by applying a 0.4 multiplier to the costs for 1ha and dividing this figure by 1,000.

Table 2.7 provides an update to the tables on pages 8 and 10 of the Open Space in New Developments SPD, showing updated costs for capital and maintenance provision. Maintenance costs are described as 15-year costs.

Table 2.7 – Summary of open space cost contributions

Type of open space	Standard	Provision £ per person	15-year maintenance per person	Total per person
Outdoor sports	1.6 ha per 1,000	£1,288.47	£683.82	£1,972.29
Children's play space – (equipped/ formal)	0.4 ha per 1,000	£579.97	£607.97	£1,187.94
Children's play space (unequipped/ informal)	0.4 ha per 1,000	£39.20	£37.80	£77.00
Informal open space	0.4 ha per 1,000	£79.45	£39.47	£118.92
Allotments and community orchards	0.4 ha per 1,000	£51.29	£27.20	£78.49
	Total per person			£3,434.64



Outdoor Sports

Capital (provision) costs for Outdoors Sports are derived from Sport England facility cost guidance (Q3 2024). The type of outdoor sport facilities considered within the costs below is based on those set out in the Open Space in New Developments SPD (2009) and the development of a recreation policy for South Cambridgeshire District Council (2005).

Maintenance costs for Outdoor Sports have been informed by Sport England lifecycle cost guidance. Maintenance costs are derived from an annual percentage allowance of the capital costs. These costs are comprised of:

- Maintenance: day to day repairs and planned preventative maintenance (mowing, scarification, line marking, rolling, top dressing, etc.)
- Sinking fund: major replacement costs, replacement of equipment (goals etc.), replacement/renovation of drainage features (sand slits/grooves / drains or similar).

Sport England sets out the following maintenance and sinking fund annual percentage allowances:

- Football: maintenance (16.5%), sinking fund (3.2%)
- Cricket: maintenance (15%), sinking fund (3.4%)
- Hockey AGP: maintenance (0.5%), sinking fund (2.5%)
- Rugby: maintenance (14.9%), sinking fund (3.6%)
- MUGA: maintenance (0.4%), sinking fund (1.2%)
- Bowling: maintenance (6.3%)

Table 2.8 shows capital (provision) costs for Outdoor Sports per sport type. Table 2.9 shows maintenance costs per sport type. Costs per person have been derived from the information provided in the SPD (catchment population per sport type).

Table 2.8 – Provision of Outdoor Sports – Capital provision/cost per person

Sport	Cost of pitch	Cost/Person
Football	£110,000.00	£146.05
Cricket	£71,000.00	£48.12
Hockey (AGP)	£915,000.00	£15.18
Rugby	£170,000.00	£15.94
MUGA	£185,000.00	£121.84
Bowling	£175,000.00	£33.47
Parking	NA	£22.50
Pavilion changing	NA	£875.60
Marginal turf	NA	£9.77

Sport	Cost of pitch	Cost/Person
Total cost per person		£1,288.47

Table 2.9 – Provision of Outdoor Sports – Maintenance provision / cost per person

Sport	Cost of 15-year maintenance of pitch	Cost/Person
Football	£325,050.00	£431.59
Cricket	£195,960.00	£132.81
Hockey (AGP)	£411,750.00	£6.83
Rugby	£471,750.00	£44.23
MUGA	£44,400.00	£29.24
Bowling	£165,375.00	£31.63
Parking	N/A	N/A
Pavilion changing	N/A	N/A
Marginal turf	N/A	£7.50
Total cost per person		£683.83

Play space for Children and Teenagers

Policy requirements set out a global play space requirement of 0.8ha per 1,000 population. This is split between 50% formal and 50% informal provision. Table 2.10 provides capital (provision) and maintenance costs for the formal element of play space provision. Costs are derived from Spon's Landscape Price Book (2024), unit rates for play equipment have been rounded up. Percentage allowances have been added for external works (15%), contingency/prelims (12%) and fees (5%).

The costs below are for a 0.3ha (3000 m²) area comprised of the following:

- Neighbourhood Equipped Area for Play (NEAP) (assume 1,000 m²) with allowance for:
 - Eight items of play equipment
 - Allowance for natural play features (e.g. climbing logs, mounds etc.)
 - Safety surfacing
 - Boundary fence, 3 gates
 - Cycle rack
 - Bins signage
 - Locally Equipped Area for Play (LEAP)
 - Local Area for Play (LAP)



- Basketball half court (350 m² incl surrounds)
- Youth shelter area (50m² incl surrounds)
- Areas for informal play (e.g., social play or kick about) (1600 m²)

Maintenance costs are a combination of maintenance unit rates (Spons, 2024) and annual percentage allowance replacement/repair costs:

- Equipped areas for play: 10% of capital cost per annum lifetime replacement cost. Allowance for annual independent safety inspection.
- Basketball & youth shelter: 2% of capital cost per annum lifetime replacement cost.
- Informal areas for play: grass cutting and strimming operations.

The costs below are for an example 0.3ha site. The quantity standard for provision for children and teenagers is 0.4ha per 1,000 people. Per person costs have been derived by dividing the overall cost of the example 0.3ha site by 1,000, dividing this by 3, and multiplying this by 4.

Table 2.10 – Children’s Play Space (equipped/ formal), cost of provision and maintenance (example 0.3 ha area)

Facility	Area	Provision	15-year maintenance
NEAP (1,000 m ²)	1,000	£265,800.00	£423,450
Basketball half court (350m ²)	350	£34,550.00	£12,307.50
Youth shelter zone (50m ²)	50	£12,000.00	£3,600.00
Bench	NA	£1,500.00	£1,500.00
Kickabout area (1600m ²)	1,600	£15,680.00	£15,120.00
Total (provision including 15% external works, 12% contingency/prelims, 5% fees)		£434,979.00	£455,977.50
Total per person (0.3ha per 1,000 standard)		£434.98	£455.98
Total per person (0.4ha per 1,000 standard)		£579.97	£607.97

Table 2.11 – Children’s Play Space (unequipped/ informal), cost of provision and maintenance (example 0.4ha area)

Facility	Provision	15-year maintenance
Informal play space	£39,200.00	£37,800.00
Total (provision including 15% external works, 12% contingency/prelims, 5% fees)	£51,744.00	£37,800.00
Total per person (0.4ha per 1,000 standard)	£39.20	£37.80

Informal Open Space

Table 2.12 provides an update to Table B4 within the SPD. Capital (provision) and maintenance costs are derived from Spons Landscape Price Book 2024. Unit rates for individual features have been rounded up where appropriate. Percentage allowances have been added for contingency/prelims (12%) and fees (5%).

Maintenance costs allow for the following:

- Grassland / pasture: cut grass (flail) (1 x per annum)
- Mown grass: cut grass and strim (10 x per annum)
- Shrub: allowance for weeding (2 x per annum) and annual pruning
- Woodland: provision annual sum allowance for general maintenance, tree replacement, removal of tree protection (potential for variation in year-on-year maintenance)
- Park trees: weed and top up mulch
- Hedgerow: weed / clear base, annual cut
- Pond: remove leaves / debris
- Bench, bins and interpretation board: cleanse
- Paths: weed control and 2% of capital cost annual lifetime repair cost.

Costs have been developed for an example 1ha site. The quantity standard for informal open space is 0.4ha per 1,000. Per person costs have been derived by applying a 0.4 multiplier and then dividing the overall estimated cost for a 0.4ha site by 1,000.

Table 2.12 – Informal Open Space (example 1ha site)

Facility	Provision	15-year maintenance
Grassland/pasture (44% of area)	£16,720.00	£3,300.00
Mown Grass (25% of area)	£8,750.00	£15,825.00
Shrub (6% of area)	£10,230.00	£3,510.00
Woodland (25% of area)	£13,250.00	£30,000.00
20 Park trees	£5,000.00	£3,000.00
Hedgerow 350 m	£6,720.00	£6,200.00
Pond	£7,500.00	£4,500.00



5 Benches	£7,500.00	£1,500.00
Paths cyclist & pedestrian (macadam, 2m wide) 300m	£34,500.00	£10,980.00
Footpath (macadam, 1.5m wide) 600m	£54,600.00	£17,460.00
Interpretation Board	£1,800.00	£600.00
4 Bins	£3,200.00	£1,800.00
Total (provision include 12% contingency/prelims, 5% fees)	£198,631.00	£98,675.00
Total per person (at 0.4ha per 1,000 standard)	£79.45	£39.47

Allotments and community orchards

Table 2.13 provides an update to Table B5 within the SPD. Costs have been derived from Spons Landscape Price Book (2024). Unit rates for features have been rounded where appropriate. Percentage allowances have been added for contingency/prelims (12%) and fees (5%). Maintenance cost estimates allow for the following:

- Hard landscape and infrastructure / facilities: 2% of capital cost per annum replacement / repair cost.
- Boundary vegetation: allowance for annual cutting
- Boundary grass and grass access paths: cutting and strimming operations (6 x per year)

Costs have been developed for an example 1ha site. The quantity standard for allotments and community orchards is 0.4ha per 1,000 people. Per person costs have been derived by applying a 0.4 multiplier to the costs for 1ha and dividing this figure by 1,000.

Table 2.13 – Allotments and community orchards (example 1ha site)

Facility	Provision	15-year maintenance
Hard standing (400m ²)	£36,000.00	£10,800.00
Water connections / water points (assume 20 standpipes)	£15,855.00	£11,891.00
Fencing (1.8m high, 500m)	£41,500.00	£12,450.00
Vehicle access gate	£1,000.00	£300.00
Soil preparation / decompaction	£4,222.00	n/a
Marginal areas / boundary planting 1m width	£5,757.00	£10,260.00
Marginal areas seeding and grass access paths	£5,250.00	£22,302.00

Facility	Provision	15-year maintenance
Total (provision include 12% contingency/prelims, 5% fees)	£128,213.00	£27,201.00
Total per person (at 0.4ha per 1,000 standard)	£51.29	£27.20

Green infrastructure provision

The following section outlines the estimated costs associated with developing areas for multifunctional 'Green Infrastructure' purposes. This typically includes habitat creation and management to encourage an increase in species population and diversity, as well as provision of access to the general public, albeit public access may not be granted to the entire site and may also be for restricted time periods where it is given. The costs below encompass land acquisition, costs associated with changing land cover, and the costs of on-going maintenance.

Cost of Land

The cost of purchasing land for green infrastructure projects is estimated to be between £18,000 - £20,000 per hectare. This cost was provided in the report 'A Nature Recovery Network for Cambridge and its Surrounds', specifically detailed on page 106[1]. This was confirmed as being up to date in discussions between LUC and the Bedfordshire Cambridgeshire and Northamptonshire Wildlife Trust (BCN Wildlife Trust) in October 2024.

Table 2.14 – Off-site green infrastructure costs

Element of provision	Cost	Unit	Notes
Land costs	£18,000.00 - 20,000.00	Per hectare	-
Green infrastructure site creation cost	£6,500.00	Per hectare	Excludes VAT
Maintenance and management cost	£2,000.00	Per hectare per year	-

Cost of converting agricultural land into accessible open space

The tables below provide detailed costs associated with the creation of both meadow/downland grassland and woodland habitats on a 4-hectare site. They were provided by the BCN Wildlife Trust in October 2024. These costs are provided on the basis that the site for the green infrastructure project

[1] Baker, M.P., Bullock, M.P., Wilson, L.A. (2021) *The Cambridge Nature Network: A Nature Recovery Strategy for Cambridge and its Surrounds*. Wildlife Trust for Bedfordshire, Cambridgeshire & Northamptonshire and Cambridge Past, Present & Future [online]. Available at:

https://www.wildlifebcn.org/sites/default/files/2021-05/CambridgeNatureNetworkStage3ReportFINAL%28lowres%29_0.pdf



is greenfield and does not have drainage / surface water issues. It is important to note that these costs are given as an average and may need to be adjusted based on the site size, as smaller sites may cost more to deliver, while larger sites could benefit from economies of scale, particularly for infrastructure items such as fencing, gates, water supply for livestock, and cattle handling facilities.

Table 2.15 – Meadow / Downland Grassland Creation (4ha / 10-acre site)

Item	Unit Cost	Total Cost
Ground preparation including creating a clean seed bed & drilling seed	Per item	£1,500.00
UK Native Wildflower Seed (30 Kg / Ha)	£8,700.00 / 100 Kg	£10,440.00
Fencing (800 metres)	£10.00 / m	£8,000.00
Farm gates & fixtures / fittings (x2)	£750.00 / gate	£1,500.00
Kissing gates & fixtures / fittings (x2)	£400.00 / gate	£800.00
Water supply (x1)	Per item	£1,500.00
Total (excluding VAT)		£23,740.00

The capital habitat creation cost is therefore approximately £6,000 / Ha excluding VAT. Land prices and ongoing management are additional.

Table 2.16 – Woodland Creation (4ha / 10-acre site)

Item	Unit	Cost
Ground preparation including preparing a clean seed bed	Per item	£2,500.00
Supply, plant & protect trees / shrubs (1,100 / Ha and 10% open space)	£4.00 / tree	£15,840.00
Year 1 & 2 beat up costs (10% & 5%)	£1.50 / tree	£891.00
Shelter removal	£0.80 / tree	£3,168.00
Thinning at year 15	£400.00 / ha	£1,600.00
Woodland management plan (required for all UK Forestry Standard planting schemes)	Per item	£2,500.00
Total (excluding VAT)		£26,499.00

The capital habitat creation cost is therefore approximately £6,500.00 / ha excluding VAT. Land prices and ongoing management are additional.

The BCN Wildlife Trust is also trialling different methods of woodland creation including double planting, which may be more cost-effective. However, for the purposes of this advice, it is considered appropriate to secure costs for traditional methods of woodland creation. Given the information above,



it is recommended that the contribution sought for the creation of offsite green infrastructure is £6,500 per hectare – noting that this excludes land costs and ongoing management expenses.

Cost of ongoing maintenance and management

The typical maintenance and management cost for green infrastructure sites (i.e. areas managed for nature with public access) are estimated to range from £1,500 to £2,000 per hectare per year, as outlined in the report ‘A Nature Recovery Network for Cambridge and its Surrounds’, specifically detailed on page 102^[2]. The BCN Wildlife Trust advised in October 2024 that the cost of maintenance is, in their experience, towards the higher end of this range. Much of this cost is for staffing by rangers. Therefore, it is recommended that the annual maintenance and management cost to be sought from developers for green infrastructure is £2,000 per hectare per year. This figure reflects the necessary investment to ensure the sustainability and ecological integrity of the habitats created, highlighting the importance of adequate funding for long-term maintenance effort.

Summary

The recommended costs for provision of off-site green infrastructure are set out in Table 2.17 below.

Table 2.17 – Green infrastructure costs

Element of provision	Cost	Unit	Notes
Land costs	£18,000.00 - 20,000.00	Per hectare	-
Green infrastructure site creation cost	£6,500.00	Per hectare	Excludes VAT
Maintenance and management cost	£2,000.00	Per hectare per year	-

^[2] Baker, M.P., Bullock, M.P., Wilson, L.A. (2021) The Cambridge Nature Network: A Nature Recovery Strategy for Cambridge and its Surrounds. Wildlife Trust for Bedfordshire, Cambridgeshire & Northamptonshire and Cambridge Past, Present & Future [online]. Available at:

https://www.wildlifebcn.org/sites/default/files/2021-05/CambridgeNatureNetworkStage3ReportFINAL%28lowres%29_0.pdf

3. Built Facilities

The costing analysis and update for the built facilities (indoors sport/leisure facilities and community buildings) were undertaken using sample data taken from AtkinsRéalis in-house database, known as Benchmark+. This contained project information based primarily on contract sum data, which was analysed and aligned to ensure consistent and reliable benchmarking comparisons. The system also allowed forecasts based on trend analysis.

Assumptions

Cost assumptions

The benchmarking estimates have been simulated using our sample data and were based on median probable values. Ranges were generated from the same analysis and were based on the 30th and 80th percentiles. These levels allowed a reasonable range around the median and provided an 80% probability that costs should not exceed this upper limit.

All the sample data used in the analysis were adjusted to a Cambridge location and a base date of Q3-2024 using location factors and inflation indices published by the BCIS on the 10th of October 2024. It was noteworthy that the sample projects used for this analysis did not reflect net zero building methods and/or specifications, and that an additional uplift to the costs would be required following a further carbon specific exercise.

Costs were representative of substructure, superstructure, preliminaries, main contractor overheads and profit, design fees and contingency.

Facilitating works, externals, basements, abnormal/site specifics and typical client direct expenditure were specifically excluded from the benchmark figures.

Costs were exclusive of VAT.

The BCIS defined the following terms related to building lifecycle costs:

- Renew costs include cost of items replacement that cover building fabric, services, and decoration. For example:
 - Fabric: Replacement of windows,
 - Services: Replacement of heating source e.g. Air Source Heat Pump,
 - Decorations: Replacement of floor finish e.g. Carpets,
- Maintain cost include planned maintenance costs that keep the fabric and services building assets in good condition.
- Operate costs are related to the day-to-day operation of a building, encompassing cleaning, utilities, and other operational expenses.

High-level life cycle maintenance assumptions

The life cycle maintenance estimates were derived from benchmark life cycle costs from BCIS. BCIS provided separate life cycle costs for the fabric, maintenance, decorations, services maintenance, cleaning, and utilities costs for different building types. The costs were expressed as an annual average in £/100m² and included the costs of renewing any component that required replacement over a given period. Guidance on the life expectancy of components could be found in the Component Life Expectancy module of BCIS building running costs online.

The data came from the sources described under 'Sources' as shown in the Appendices at the end of this report. In most cases, the figures shown were historic records of the costs actually incurred by the occupants. There was no indication of the standards to which the buildings are being operated. It was therefore impossible to know if expenditure from one organisation would be sufficient in the context of another.

The estimates provided an indication of the average annual level of expenditure on each building type. It should have been borne in mind that expenditure on a particular building, in any year, could have differed widely from the average. For example, complete external cleaning may well be carried out in one year, but not in the next and energy expenditure would have been affected by variations in climate. Similarly, energy consumption will vary significantly depending on building location, orientation and exposure. The costs were estimates based on a £/m²/annum basis only and as such, should have only been used for high-level maintenance budgeting.

Indoors Sports facilities

Building costs

Table 3.1 below show the cost of building swimming pools. Assuming a building of 5,855 m², the building cost for leisure centres wet (including swimming pools) is £3710/m².

Table 3.1 – Indoors Sport facilities cost

Facilities	GIA (m ²)	£/m ²
Leisure centres dry (exclude swimming pools)	5,855	3,500
Leisure centres wet (include swimming pools)	5,855	3,710
Pavilions	415	4,740

Table 3.2 Swimming pools costs relate to the net cost of the element and exclude preliminaries, overheads and profit, fees and contingencies.

Table 3.2 – Swimming pools cost

Swimming Pools	Unit	Cost (£)	Total cost (£)
Swimming pools £/lane (6 lane x 25m traditional construction)	6	165,490	992,940
Swimming pools £/per lane (6 lane x 25m Myrtha steel pool tank)	6	94,810	568,860
Learner pools £/m ² (traditional construction)	120	4,240	508,800
Learner pools £/m ² (Myrtha steel pool tank)	120	2,530	303,600
Learner pools moveable floor (typical m ²)	120	1,670	200,400
Swimming pools filtration (typical m ³)	900	580	522,000

High-level life cycle maintenance cost

Table 3.3 below shows the renew, operate and maintenance costs for leisure centres wet (including swimming pools). The life cycle costs for a leisure centre including swimming pools are £126.96/m²/year. Assuming a building with a GIFA¹ of 6,000 m², the annual life cycle cost is £761,760 and the total life cycle cost for 15 years is £11,426,400.

¹ GIFA is Gross Internal Floor Area



Table 3.3 – Leisure centres life cycle components category

Name	Renew (£/m ² /year)			Maintain (£/m ² /year)		Operate (£/m ² /year)		Total (£/m ² /year)	GIFA (m ²)	Annual Total (£/year)	15 Year Total (£)
	Fabric	Services	Decoration	Fabric	Services	Cleaning	Utilities				
Leisure centres including swimming pools	£9.70	£7.46	£3.38	£5.21	£13.84	£22.73	£64.64	£126.96	6,000	£761,760	£11,426,400

Table 3.4 – Leisure centres life cycle components category

LCC Category	Renew (£/15Year)	Maintain (£/15Year)	Operate (£/15Year)
Fabric	£873,000	£468,900	£0
Services	£671,400	£1,245,600	£0
Decoration	£304,200	£0	£0
Cleaning	£0	£0	£2,045,700
Utilities	£0	£0	£5,817,600
15 Year Total (£)	£1,848,600	£1,714,500	£7,863,300

Source: Price Basis, Price Level at 3Q2024 and East of England Downloaded: 10-Oct-2024 11:15.



Community Buildings

Building costs

Due to the availability of comparative data for small buildings, the costs for community building have been compiled based on elemental benchmark rates. These rates are typically reflective of traditional construction methods and specifications for single-storey buildings. Assuming a square building layout with a GIA of 400m², the building costs for a community centre are £4,020/m².

Table 3.5 – Community Buildings cost

Facilities	GIA (m ²)	£/m ²
Community centre	400	4,020

High-level life cycle maintenance cost

Table 3.6 below shows the renewal, operation and maintenance costs for community centres. The life cycle costs for community centres are £117.57/m²/year. Assuming a building with a GIFA² of 400 m², the annual life cycle cost is £47,028, and the total life cycle cost for 15 years is £705,420

² GIFA is Gross Internal Floor Area



Table 3.6 – Community Centre life cycle components category

Name	Renew (£/m ² /year)			Maintain (£/m ² /year)		Operate (£/m ² /year)		Total (£/m ² /year)	GIFA (m ²)	Annual Total (£/year)	15 Year Total (£)
	Fabric	Services	Decoration	Fabric	Services	Cleaning	Utilities				
Community Centres	£10.77	£7.08	£5.07	£5.80	£13.13	£39.49	£36.23	£117.57	400	£47,028	£705,420

Table 3.7 – Community Centre life cycle components category

LCC Category	Renew (£/15Year)	Maintain (£/15Year)	Operate (£/15Year)
Fabric	£64,620	£34,800	£0
Services	£42,480	£78,780	£0
Decoration	£30,420	£0	£0
Cleaning	£0	£0	£236,940
Utilities	£0	£0	£217,380
15 Year Total (£)	£137,520	£113,580	£454,320

Source: Price Basis, Price Level at 3Q2024 and East of England Downloaded: 10-Oct-2024 11:15



APPENDICES

Leisure Centres



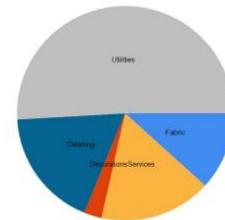
562.11 Sports centre/recreation centres inc swimming pools
Price level at 3Q2024 and East of England

Source	Renew and Maintain (£/100m ² /annum)			Sub-Total	Operate (£/100m ² /annum)		Total
	Fabric	Services	Decorations		Cleaning	Utilities	
BCIS Estimate - 541. Covered swimming pools	1,200	2,300	300	3,800	2,150	8,600	14,550
BCIS Estimate - 562.1 Sports centres/recreational centres	1,400	2,200	350	3,950	2,600	4,650	11,200
Society of Chief Architects of Local Authorities (SCALA) - Leisure Buildings	932	603					
Society of Chief Architects of Local Authorities (SCALA) - Required Budget - Leisure Premises				4,676			
University Estate - Sports Centres	2,398	2,610	0	5,008	2,351 ¹		
Northern Police Estate - Sports Complex				653	720	3,948	5,321
Department of the Environment, Transport and the Regions Energy Efficiency Office - Sports Centres with Pools					5,048 ¹		
CIBSE Guide F 2004 - Sports / Combined centre					2,723 ¹		
CIBSE Guide F 2004 - Sports / Dry sports centre					1,742 ¹		
Department of the Environment, Transport and the Regions Energy Efficiency Office - MOD Sports Halls with Pool					4,040 ¹		
Report on DEC for CIBSE - Dry Sports and Leisure Facility - non-electrically heated					2,036 ¹		
Report on DEC for CIBSE - Dry Sports and Leisure facility - electrically heated					1,412 ¹		
BCIS Occupancy Cost Plans - Occupancy Costs of Sports Facilities (sports facility with leisure pool)	1,013	1,047	348	2,408	2,516	6,061	10,985



Source	Renew and Maintain (£/100m ² /annum)			Sub-Total	Operate (£/100m ² /annum)		Total
	Fabric	Services	Decorations		Cleaning	Utilities	
Warwickshire County Council - Corporate Buildings - Energy Consumption						1,564	
Warwickshire County Council - Corporate Buildings - Running Costs						2,538	
2.5% of Capital Cost				6,990			
BCIS Estimate	1,491	2,130	338	3,959	2,273	6,464	12,696

¹ Utilities costs exclude the costs of water, drainage and effluent



Community Centres



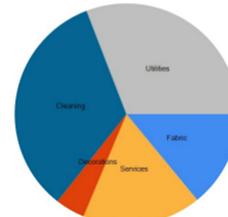
532. Community Centres
Price level at 3Q2024 and East of England

Source	Renew and Maintain (£/100m ² /annum)			Sub-Total	Operate (£/100m ² /annum)		Total
	Fabric	Services	Decorations		Cleaning	Utilities	
BCIS Estimate - 562.1 Sports centres/recreational centres	1,400	2,200	350	3,950	2,600	4,650	11,200
BCIS Estimate - 448. Day centres	1,400	1,900	350	3,650	4,200	4,350	12,200
BCIS Occupancy Cost Plans - Occupancy Costs of Community Centres (Large multi-activity centre) - SR 337	791	1,444	374	2,609	5,566	1,724	9,899
BCIS Occupancy Cost Plans - Occupancy Costs of Community Centres (Small Community Centre) - SR 337	1,019	2,424	644	4,087	4,556	1,724	10,367
Department of the Environment, Transport and the Regions Energy Efficiency Office - Social Clubs						2,212 ¹	
Department of the Environment, Transport and the Regions Energy Efficiency Office - Bingo Clubs						5,599 ¹	
Water Benchmarking - Community Centres						57 ²	
Department of the Environment, Transport and the Regions Energy Efficiency Office - Day centres						2,592	
Department of the Environment, Transport and the Regions Energy Efficiency Office - Community Centres						1,330	
Northern Ireland Public Sector Buildings - Community Centres - Mixed Fuel Buildings						1,416 ¹	
Northern Ireland Public Sector Buildings - Community Centres - All-electric Buildings						1,609 ¹	
Salford Council - Community Centres						4,263 ¹	
BCIS Occupancy Cost Plans - Occupancy Costs of Religious Buildings (small church)	799	1,749	372	2,920	4,646	3,153	10,719

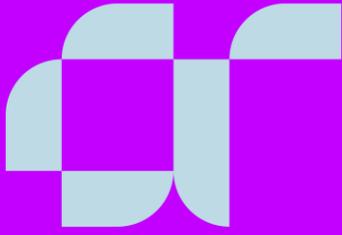


Source	Renew and Maintain (£/100m ² /annum)			Sub-Total	Operate (£/100m ² /annum)		Total
	Fabric	Services	Decorations		Cleaning	Utilities	
BCIS Occupancy Cost Plans - Occupancy Costs of Religious Buildings (larger building)	1,957	1,584	673	4,214	3,849	3,671	11,734
CIBSE TM66 - Schools and seasonal public buildings						1,298 ¹	
Hutchins Black Book 2004 - Community Centres	443	322			617	1,061	
BCIS Occupancy Cost Plans - Occupancy Costs of Community Centres (single and 2-storey youth centre)	1,415	1,488	555	3,458	7,328	1,352	12,138
BCIS Occupancy Cost Plans - Occupancy Costs of Community Centres (2-storey community centre)	1,359	1,137	460	2,956	6,088	1,610	10,654
East Devon Council - Community centres					1,061	358	
2.5% of Capital Cost					6,220		
BCIS Estimate	1,657	2,020	507	4,184	3,949	3,623	11,756

- ¹ Utilities costs exclude the costs of water, drainage and effluent
- ² Utilities costs are only for water consumption



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