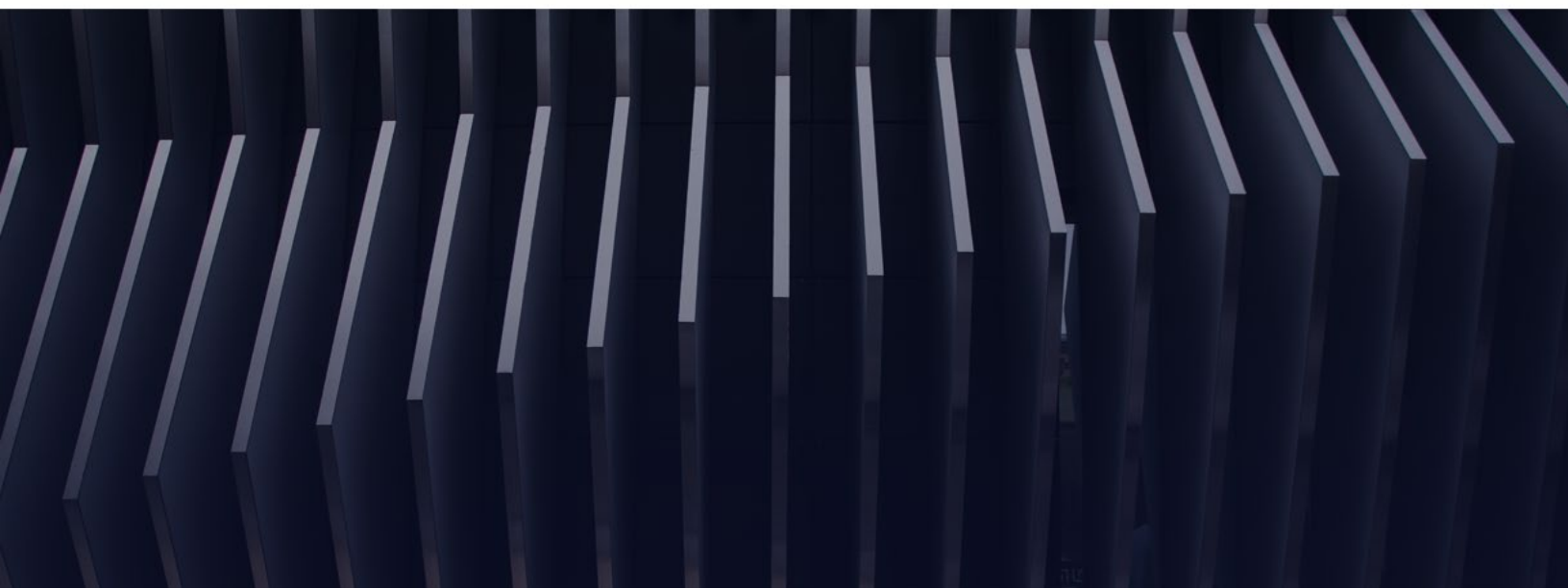


Wilshire Indexes

FT Wilshire Climate Change Index Series Methodology

November 2025



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Introduction

The indexes in the FT Wilshire Climate Change Index Series are designed to meet the requirements of UK Paris-Aligned Benchmarks as set out in the UK Benchmarks Regulation¹.

The benchmark administrator for the indexes is Wilshire OpCo UK Limited.

The indexes in the FT Wilshire Climate Change Index Series are not provided for, and are not licensed for, use in accordance with the EU Benchmarks Regulation².

The requirements to achieve an index aligned with the UK Paris-Aligned Benchmark criteria are achieved through the targeting of specific emission intensity improvements in both absolute terms and relative to the underlying benchmark for the index coupled with the sectoral allocation and company exclusion constraints set out in Commission Delegated Regulation (EU) 2020/1818³. The emission intensity improvements are achieved via a tilting methodology whereby an initial set of index weights is multiplied by positive scores to yield a new set of index weights with the required improvements. The details of the index construction are provided below.

Price, total, and net return indexes are calculated for all member indexes. The reinvestment of all dividend payments is reflected in the total-return indexes at the close on the ex-dividend date but is not reflected in the price indexes. Only special dividends affect the price indexes.

Indexes are calculated in USD and variants converted to GBP, EUR, JPY, and other major currencies (using WM/Reuters 4pm London time exchange rates) are provided in index product files.

This document describes the procedures used to construct and maintain the FT Wilshire Climate Change Index Series. The document is reviewed at least annually but more frequent updates may be made in the light of market events or as a result of feedback obtained via a consultation. It should be read in conjunction with the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#) which describes the index treatment of corporate actions and events, and the procedures to be followed for suspended or delisted securities, and at times of market disruption. The Equity Index Calculation and Corporate Events Guide applies to all standard FT Wilshire equity indexes and to other indexes calculated or administered by Wilshire Indexes where this is stated in the methodology documentation for those indexes.

In addition to this document, the indexes will have eligibility criteria including liquidity, nationality, and minimum size thresholds based upon the rules of the underlying index.

1 Index Construction

1.1 Data Definitions

The data definitions are aligned with those found in Commission Delegated Regulation (EU) 2020/1818.

1.1.1 GHG Emission Intensity

A company's GHG Emission Intensity E_i is defined as the ratio of the sum of Scope 1, Scope 2 and phased-in Scope 3 GHG emissions, in metric tons of CO₂e, to enterprise value including cash (EVIC), in millions of USD. Details of reported carbon data and the modelling of unreported carbon data are given in the document [Wilshire Indexes Carbon Emissions Model](#)⁴.

¹ [The Benchmarks \(Amendment and Transitional Provision\) \(EU Exit\) Regulations 2019](#)

² [Regulation - 2016/1011 - EN - Benchmark Regulation - EUR-Lex](#)

³ [COMMISSION DELEGATED REGULATION \(EU\) 2020/1818](#)

⁴ For universe constituents with neither reported nor modelled carbon emission data, their GHG emission intensity will comprise of: the second level classification average if there are at least three stocks with valid data in the same second level classification; otherwise, the first level classification average if there are at least three stocks with valid data in the same first level classification; otherwise, the universe average. For this purpose, the Scope 1 & 2 GHG emission intensity is treated separately from the Scope 3 GHG emission intensity.

1.1.2 Industry Factor

The industry factor is defined by the variable:

$$\delta_{i \in I_J} = \begin{cases} 1 & \text{if } i \in I_J \\ 0 & \text{if } i \notin I_J \end{cases} \quad (1)$$

In other words, this variable takes the value of one if the stock i is a member of industry I_J and zero otherwise. The industry classification used for indexes in the FT Wilshire Climate Change Index Series is the Wilshire Global Asset Taxonomy System (GATS). For details of GATS industry classifications see the [Wilshire Indexes Global Assets Taxonomy System](#).

1.1.3 Country Factor

The country factor is defined by the variable:

$$\delta_{i \in C_K} = \begin{cases} 1 & \text{if } i \in C_K \\ 0 & \text{if } i \notin C_K \end{cases} \quad (2)$$

In other words, this variable takes the value of one if the stock i is a member of country C_K and zero otherwise. The country classification used is aligned with that of the GEMS universe.

1.1.4 High Climate Impact Sector Factor

The high climate impact sector factor is defined by the variable:

$$\delta_{i \in H} = \begin{cases} 1 & \text{if } i \in H \\ 0 & \text{if } i \notin H \end{cases} \quad (3)$$

In other words, this variable takes the value of one if the stock i is a member the high climate impact set of stocks H and zero otherwise. The high climate impact set is the union of stocks in the high climate impact sectors given in Appendix A.

1.2 Calculation of Z-Scores and S-Scores

Emission intensities are converted to Z-Scores by subtracting their cross-sectional mean μ from each raw value and then dividing by the cross-sectional standard deviation σ :

$$Z_{E,i} = \frac{E_i - \mu}{\sigma} \quad (4)$$

A winsorization process is then applied to ensure that all the results lie in the range -3 to +3. Emission Z-Scores, industry factors and high climate impact sector factors are then mapped to positive “S-Scores” according to:

$$S_{E,i} = \text{Exp}[Z_{E,i}], \quad S_{I_J,i} = \text{Exp}[\delta_{i \in I_J}], \quad S_{C_K,i} = \text{Exp}[\delta_{i \in C_K}] \quad \text{and} \quad S_{H,i} = \text{Exp}[\delta_{i \in H}] \quad (5)$$

respectively. Stocks are therefore assigned a set of positive numbers that increase monotonically with their Z-Scores, industry factors, country factors and high climate impact sector factors.

1.3 Multiple Tilt Equation

The climate index weights are given by the multiple tilt equation:

$$W_i = \frac{1}{\Omega} \times S_{E,i}^n \times S_{I_1,i}^t \times \dots \times S_{I_J,i}^u \times S_{C_1,i}^v \times \dots \times S_{C_{48},i}^w \times S_{H,i}^r \times \hat{M}_i \quad (6)$$

where $S_{E,i}^n$ is the Emission Intensity tilt of strength n , $S_{I_j,i}^t$ is the J^{th} industry tilt of strength t , $S_{C_K,i}^v$ is the K^{th} country tilt of strength v , $S_{H,i}^r$ is the high climate impact sector tilt of strength r , $\hat{M}_i$ is the set of weights obtained by removing the stocks on the index exclusion list specified in Table 1 from the set of underlying benchmark weights M_i and:

$$\Omega = \sum_{i=1}^N S_{E,i}^n \times S_{I_1,i}^t \times \dots \times S_{I_J,i}^u \times S_{C_1,i}^v \times \dots \times S_{C_{48},i}^w \times S_{H,i}^r \times \hat{M}_i \quad (7)$$

The exclusions lists that are available for use in the construction of the indexes within the FT Wilshire Climate Change Index Series are set out in Appendix B. Tilt strengths can take positive or negative values. Varying the tilt strengths in equation (6) gives rise to different levels of emission intensity reductions, industry and sector exposures. Other tilts that control maximum weight, capacity and turnover may also be applied.

1.4 Emission Intensity, Industry and Sector Targets

At each semi-annual index reconstitution, a range for Weighted Average Emission Intensity is specified by:

$$0 \leq \sum_{i=1}^N W_i \times E_i \leq \text{Min} \left[(1 - P) * \sum_{i=1}^N M_i \times E_i, \frac{E_B}{I_B} * (1 - Q)^{n/2} \right] \quad (8)$$

where E_B is the index Weighted Average Emission Intensity at a given decarbonization base date, n counts the number of semi-annual index reconstitutions since that decarbonization base date, P represents the point in time reduction relative to the benchmark, Q the required year-on-year reduction from that decarbonization base date, and I_B is an inflation adjustment calculated as the maximum of the ratio of average value of EVIC at the review to that at the decarbonization base date and one. The floor of one prevents the year-on-year carbon emissions target increasing between base dates. See Table 1 in Section 2 for the P and Q values and Table 2 of Appendix C for the decarbonization base dates, for the Climate Change Indexes.

The active weight of stocks in the high carbon impact sectors is set to zero:

$$\sum_{i=1}^N (W_i - M_i) \times \delta_{i \in H} = 0 \quad (9)$$

Ranges are specified for active industry weights according to:

$$L_{I_j} \leq \sum_{i=1}^N (W_i - M_i) \times \delta_{i \in I_j} \leq U_{I_j} \quad (10)$$

where L_{I_j} and U_{I_j} represent the lower and upper allowable limits for the active weight of industry I_j .

Similar constraints exist for active country weights:

$$L_{C_K} \leq \sum_{i=1}^N (W_i - M_i) \times \delta_{i \in C_K} \leq U_{C_K} \quad (11)$$

where L_{C_K} and U_{C_K} represent the lower and upper allowable limits for the active weight of country C_K .

1.5 Index Weights

Tilt strengths in equation (6) are found that satisfy equations (8), (9), (10) and (11) along with constraints on maximum weight, minimum weight and capacity ratio (Climate Change Index weight / underlying benchmark weight) ⁵.

Should the solution be infeasible, a hierarchical approach to constraint relaxation is applied:

- (1) Increase upper country/industry bound by 10bps and decrease lower country/industry bound by 10bps. Repeat until a solution is found or up to a maximum of 50 times.
- (2) Increase maximum stock weight by 10bps, reset initial industry bounds and re-apply relaxation scheme (1). Repeat until a solution is found or up to a maximum 50 times.
- (3) Seek a solution where neither industry nor maximum stock weight constraints are applied.

Should the relaxation process fail to yield a feasible solution, the index weights will consist of the pre-reconstitution index weights, renormalized to account for exclusion of stocks that are not members of the underlying benchmark on the effective date.

⁵ In exceptional circumstances an additional constraint on the 2-way turnover may be applied.

2 Index Parameters

Table 1 sets out the indexes that currently constitute the FT Wilshire Climate Change Index Series, their emission intensity targets, the weighting constraints, and exclusion lists.

Table 1: Emission Intensity Targets and Index Parameters for Climate Change Indexes

Index Name	Underlying Benchmark	Emission Intensity (P%, Q%)	Active Industry Const. (%)	Active Country Const. (%)	High Climate Impact (%)	Max. Weight (%)	Min. Weight (bps)	Max. Cap. Ratio	Excl. List
FT Wilshire US Large Cap Climate Change 1.5°C Target Index	FT Wilshire US Large Cap Index	(50, 7)	+/-5	N/A	0	5	5	10	PAB
FT Wilshire Developed Large Cap Climate Change 1.5°C Target Index	FT Wilshire Developed Large Cap Index	(50, 7)	+/-5	+/-1	0	5	2	10	PAB

3 Index Maintenance

3.1 Index Reconstitution

The indexes in the FT Wilshire Climate Change Index Series are reconstituted semi-annually in March and September. The price data cutoff date is Wednesday before the first Friday of the review month. Constituent and free-float changes are updated after the close of trading on the third Friday of the reconstitution month.

Emission data and exclusion lists are updated at the end of January for the March reconstitution, and at the end of July for the September reconstitution.

3.2 Intra-Reconstitution Additions

Additions to the benchmarks underlying the FT Wilshire Climate Change Index Series (as per Table 1) are eligible for inclusion in the corresponding index in the FT Wilshire Climate Change Index Series at the next index reconstitution.

3.3 Intra-Reconstitution Deletions

A constituent will be removed from an index in the FT Wilshire Climate Change Index if it is removed from the corresponding underlying benchmark (as per Table 1). The deletion will be concurrent with that from the underlying benchmark and its weight will be distributed pro-rata amongst the remaining constituents in the index.

4 Corporate Events

4.1 Corporate Action Treatment

Corporate action treatment for the indexes in the FT Wilshire Climate Change Index Series can be found in the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#). The index will be treated as a non-market capitalization index.

4.2 Suspension of Dealing

Suspension of Dealing rules for the indexes in the FT Wilshire Climate Change Index Series can be found in the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#).

4.3 Takeovers, Mergers and Spinoffs

The treatment of takeovers, mergers and spinoffs for the indexes in the FT Wilshire Climate Change Index Series can be found in the [Wilshire Indexes Equity Index Calculation and Corporate Action Guide](#), the index will follow the non-market capitalization sections of the guide..

Methodology Approval

This Methodology was approved by the Index Management Committee on 6 November 2025.

Appendix A: High Climate Impact Sectors

A.1 PAB High Climate Impact Sectors

The NACE definition of high climate impact sectors is as follows:

- Agriculture, forestry and fishing
- Mining and quarrying
- Manufacturing
- Electricity, gas, steam and air conditioning supply
- Water supply; sewerage, waste management and remediation activities
- Construction
- Wholesale and retail trade; repair of motor vehicles and motorcycles
- Transportation and storage
- Real estate activities

Each of these sectors is mapped to the equivalent sector in the Wilshire Global Asset Taxonomy System (GATS) to define the high climate impact sectors for the indexes in the FT Wilshire Climate Change Index Series.

Appendix B: Exclusions

B.1 PAB Index Exclusions

Companies involved in the following activities are excluded from the PAB Indexes:

- Controversial weapons.
- Cultivation and production of tobacco.
- UN Global Compact violations.
- OECD Guidelines for Multinational Enterprises violations.
- Exploration, mining, extraction, distribution or refining of hard coal and lignite (1% or more of revenues).
- Exploration, extraction, distribution or refining of oil fuels (10% or more of revenues).
- Exploration, extraction, manufacturing or distribution of gaseous fuels (50% or more of revenues).
- Electricity generation with a GHG intensity of more than 100 g CO₂ e/kWh (50% or more of revenues).
- Significant harm to the environment.

For more details of the exclusion criteria please see [Wilshire Indexes Paris-Aligned Benchmark Exclusion Criteria](#)

Appendix C: Decarbonization Base Dates & Phased Scope 3 GHG Emissions

Table 2 displays the decarbonization base dates for year-on-year reduction of Scope 1 + Scope 2 GHG Emissions for phased Scope 3 GHG Emissions for the indexes that make up the FT Wilshire Climate Change Index Series. At the semi-annual reconstitutions corresponding to decarbonization base dates in Table 2, the semi-annual reconstitution count in equation (8) is reset to zero.

Table 2: Base dates and phased in Scope 3 emissions

Index Name	Scope 1+ 2	Scope 3: Phase 1	Scope 3: Phase 2	Scope 3: Phase 3
FT Wilshire US Large Cap Climate Change 1.5°C Target Index	Sep 2015	Sep 2020	Sep 2022	Sep 2024
FT Wilshire Developed Large Cap Climate Change 1.5°C Target Index	Sep 2015	Sep 2020	Sep 2022	Sep 2024

Scope 3 GHG Emission phases:

- Phase 1 - GHG Emissions data for energy and mining sectors
- Phase 2 - GHG Emissions data for transportation, construction, buildings, materials and industrial sectors
- Phase 3 - GHG Emissions data for all other sectors.

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