

Driven pile

A pile is a slender timber, concrete, or steel structural element, driven, jetted, or otherwise embedded on end in the ground for the purpose of supporting a load. A pile is also characterized as deep foundation, where the loads are transferred to deeper subsurface layers.

A driven pile is a rammed, vibrated, or otherwise driven into the ground, pile.

IFC 2x3 note

For IFC2x3 use the PredefinedType enumerator of USERDEFINED.

IfcElementType	IfcPile	=IfcExportAs
IfcPredefinedType	DRIVEN	=IfcExportType
Suggested Filename:	Pile_Driven	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Structural	

Source

Property Categories

Classification

BIM Forum	Admin data	Masterformat	31 62 00 : Driven Piles
COBie	Construction logistics data	NatspecWorksection	0301 Piling
IFC 2x3	Cost data	Omniclass Table 21 Elements	21-01 10 20 10 : Driven Piles
IFC4 Add2	Facilities management data	Omniclass Table 22 Work Results	22-31 62 00 : Driven Piles
NATSPEC BIM	Geometric data	Omniclass Table 23 Products	23-13 29 11 13 : Driven Piles
NATSPEC Spec	Manufacturer data	Uniclass Elements	EF_20_05 : Substructure
	Performance data	Uniclass Products	Pr_20_85_62 : Piles and ancillary products
	Scheduling data	Uniclass Systems	Ss_20_05_65 : Piling systems
	Spatial and location data	Uniformat	A1020.10 : Driven Piles
	Specification data		
	Sustainability data		

Property	Source	Description
Admin data		
CreatedBy	NATSPEC BIM	The name of the person, organisation or library provider that created the object.
CreatedByURL	NATSPEC BIM	URL hyperlink to the object creator's website.
ModifiedIssue	NATSPEC BIM	To record the last date of issue (version or revision) of the object within an object library. Add the date in the following format <yyyymmdd.no> where the 'no' suffix is equal to the number of times the object has been issued on that date. For example 20180316.01.
ObjectType	IfcPile (IFC2x3)	Required for PredefinedType of USERDEFINED Complete value with: DRIVEN
Reference	Pset_PileCommon (IFC4)	Reference ID for a specified type in a project (e.g. type 'A-1'). Also known as Construction type. Provide as an alternative to the name of the object type, if software does not support object types.
Construction logistics data		
ConstructionMethod	NATSPEC BIM	
GrossWeight	Qto_PileBaseQuantities (IFC4)NATSPEC BIM	
NetWeight	Qto_PileBaseQuantities (IFC4)	Takes all openings or recesses into account.
ShippingWeight	NATSPEC BIM	
Status	Pset_PileCommon (IFC4)	Status of the object, predominately used in renovation or retrofitting projects. Complete value with: NEW, EXISTING, DEMOLISH, TEMPORARY, OTHER, NOTKNOWN or UNSET
StoragePlacementOnSite	NATSPEC BIM	

Cost data		
AdditionalTax	NATSPEC BIM	
AssemblyCost	NATSPEC BIM	
AssetAccountingType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Asset type for accounting purposes. Complete value with: FIXED, NONFIXED, OTHER, NOTKNOWN or UNSET (PEnum_AssetAccountingType)
AssetInsuranceType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of insurance rating. Complete value with: PERSONAL, REAL, OTHER, NOTKNOWN or UNSET (PEnum_AssetInsuranceType)
AssetTaxType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of taxation group. Complete value with: CAPITALISED, EXPENDED, OTHER, NOTKNOWN or UNSET (PEnum_AssetTaxType)
ConceptualCost	NATSPEC BIM	
CostOverRun	NATSPEC BIM	
FutureCostAssumptions	NATSPEC BIM	
InstallationCost	NATSPEC BIM	
InstalledCost	NATSPEC BIM	
PurchaseInformation	NATSPEC BIM	
RecordedActualCost	NATSPEC BIM	
ShippingCost	NATSPEC BIM	
TotalOwnershipCost	NATSPEC BIM	
Facilities management data		
AccessibilityPerformance	COBie_ElementTypeCOBie_Specification	Accessibility issue(s) that product satisfies.

AcquisitionDate	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Date the item was purchased (Format: YYYY-MM-DD).
AssessmentCondition	NATSPEC BIM Pset_Condition (IFC4)	Overall condition rating based on assessment. Rating scale to be agreed prior (e.g. Good, OK , Poor).
AssessmentDate	Pset_Condition (IFC4)	Date of overall condition assessment (Format: YYYY-MM-DD).
AssessmentDescription	Pset_Condition (IFC4)	Qualitative description of the condition.
AssetIdentifier	COBie_Component	Alternative identifier for specific component, used as defined by contract.
AssetType	COBie_AssetCOBie_ElementType	Complete value with: 'Fixed' or 'Movable'
Category	COBie	Classification code.
CodePerformance	COBie_ElementTypeCOBie_Specification	Code compliance requirement(s) that product satisfies.
ComponentID	NATSPEC BIM	
Constituents	COBie_ElementTypeCOBie_Specification	Details of various parts of the object.
Description	COBie	Concise description of the object.
DurationUnit	COBie	Units used to record expected life duration. Typically 'year'.
Exclusions	Pset_Warranty (IFC4)Pset_Warranty (IFC2x3)	Items, conditions or actions that may be excluded from the warranty or that may cause the warranty to become void.
ExpectedLife	NATSPEC BIMCOBie	Expected serviceable life of object.
Features	COBie_ElementTypeCOBie_Specification	Primary features or important characteristics of the product.
Grade	COBie_ElementTypeCOBie_Specification	Standard grading(s) to which the product corresponds.
InstallationDate	NATSPEC BIMCOBie_Component	Format: YYYY-MM-DD.

IsExtendedWarranty	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Complete value with: TRUE or FALSE (IfcBoolean)
ModelNumber	COBie	Model number or designator of the product model (or product line) as assigned by the manufacturer.
Name	COBie	Unique human readable name for object type.
ReplacementCost	NATSPEC BIM COBie_EconomicImpactValues COBie_ElementType	Cost to replace product.
Shape	COBie_ElementType COBie_Specification	Characteristic shape of the object. e.g. Square.
SustainabilityPerformance	COBie_ElementType COBie_Specification	Sustainability issue(s) that product satisfies.
TagNumber	COBie_Component	Tag number for product or equipment at installation.
WarrantyContent	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Description of what is included in warranty.
WarrantyDescription	COBie_Warranty	Concise description of warranty content and any items, conditions or actions that are excluded from warranty or that will cause the warranty to become void.
WarrantyDurationLabor	COBie_Warranty	Duration of labour warranty.
WarrantyDurationParts	COBie_Warranty	Duration of parts warranty.
WarrantyDurationUnit	COBie	Units used to record warranty durations. Typically 'year'.
WarrantyEndDate	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
WarrantyGuarantorLabor	COBie_Warranty	email address for organisation responsible for labour warranty.
WarrantyGuarantorParts	COBie_Warranty	email address for organisation responsible for parts warranty.
	Pset_Warranty (IFC4) Pset_Warranty	

WarrantyIdentifier	(IFC2x3)	Identifier assigned to warranty.
WarrantyPeriod	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	
WarrantyStartDate	NATSPEC BIMCOBie_Component Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
AISCShapeTypeSize	BIM Forum	
ConcreteCover	NATSPEC Spec	Min cover to reinforcement.
CrossSectionArea	NATSPEC BIMQto_PileBaseQuantities (IFC4)	
CutOffLevel	NATSPEC Spec	
Diameter	NATSPEC BIM NATSPEC Spec	
GrossSurfaceArea	Qto_PileBaseQuantities (IFC4)	
GrossVolume	NATSPEC BIMQto_PileBaseQuantities (IFC4)	
Length	NATSPEC BIMQto_PileBaseQuantities (IFC4) NATSPEC Spec	
NetVolume	Qto_PileBaseQuantities (IFC4)	Takes all openings or recesses into account.
NominalHeight	COBie_ElementTypeCOBie_Specification	Typically the vertical characteristic dimension of the object.
NominalLength	COBie_ElementTypeCOBie_Specification	Typically the primary or larger of the two perpendicular horizontal dimensions of the object.
NominalWidth	COBie_ElementTypeCOBie_Specification	Typically the secondary or smaller of the two perpendicular horizontal dimensions of the object.

OuterSurfaceArea	Qto_PileBaseQuantities (IFC4)	
Size	NATSPEC BIM COBie_ElementType COBie_SpecificationNATSPEC Spec	
TimberPileTaper	NATSPEC Spec	
TimberPileToeDiameter	NATSPEC Spec	
ToeLevel	NATSPEC Spec	
Width	NATSPEC BIM	
Manufacturer data		
Accessories	NATSPEC BIM	Details of available accessories.
ArticleNumber	Pset_ManufacturerTypeInformation (IFC4) Pset_ManufacturerTypeInformation (IFC2x3)	Reference applied to product, according to scheme for article number definition defined by manufacturer. Often used as purchasing number.
AssemblyPlace	NATSPEC BIM Pset_ManufacturerTypeInformation (IFC4)	Defines where assembly is to take place. Complete value with: SITE, FACTORY or NOTDEFINED (IfcAssemblyPlaceEnum)
Availability	NATSPEC BIM	
BarCode	COBiePset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Bar code given to occurrence of the product.
BatchReference	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Identity of the batch from which the occurrence of the product is taken.
Defects	NATSPEC BIM	To record any defects found.
FabricationSequenceNumber	BIM Forum	
GlobalTradeItemNumber	Pset_ManufacturerTypeInformation (IFC4)	GTIN is an identifier for trade items developed by GS1 (www.gs1.org).

Manufacturer	COBieNATSPEC BIM Pset_ManufacturerTypeInformation (IFC4) NATSPEC Spec Pset_ManufacturerTypeInformation (IFC2x3)	Name of the manufacturer (or assembler).
ManufacturerURL	NATSPEC BIM	URL hyperlink to the manufacturer's website.
ModelLabel	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM	The descriptive model name of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelLabel	Pset_ManufacturerTypeInformation (IFC2x3)	The model number and/or unit designator assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM NATSPEC Spec	The model number or designator of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC2x3)	The name of the manufactured item as used by the manufacturer.
OrderNumber	NATSPEC BIM	
PointOfContact	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Organization that should be contacted for action under the terms of the warranty.
ProductInformation	NATSPEC BIM	A valid URL hyperlink to further product information, such as technical documentation, installation guides, etc.
ProductType	NATSPEC BIM	
ProductionYear	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM Pset_ManufacturerTypeInformation (IFC2x3)	
SerialNumber	COBiePset_ManufacturerOccurrence (IFC4) NATSPEC BIM Pset_ManufacturerOccurrence (IFC2x3)	Serial number assigned to an occurrence of a product.

Performance data		
CapacityBendingMomentX	NATSPEC Spec	
CapacityBendingMomentY	NATSPEC Spec	
CapacityHorizontalLoad	NATSPEC Spec	
CapacityVerticalLoad	NATSPEC Spec	
ConcreteCompressiveStrength28Day	BIM ForumNATSPEC Spec	
DeadLoad	NATSPEC BIM	
DesignBendingMomentX	NATSPEC Spec	
DesignBendingMomentY	NATSPEC Spec	
DesignServiceabilityHorizontalLoad	NATSPEC Spec	
DesignServiceabilityVerticalLoad	NATSPEC Spec	
DesignUltimateHorizontalLoad	NATSPEC Spec	
DesignUltimateVerticalLoad	NATSPEC Spec	
DrivingResistance	NATSPEC Spec	
LiveLoad	NATSPEC BIM	
Scheduling data		
DeliverBy	NATSPEC BIM	
FabricationTime	NATSPEC BIM	
InstallationSequence	NATSPEC BIM	
InstallationTime	NATSPEC BIM	

LeadTime	NATSPEC BIM	
Spatial and location data		
GISTag	NATSPEC BIM	
GPSTag	NATSPEC BIM	
Specification data		
ASTMMaterialGrade	BIM Forum	
Coating	BIM Forum	
Color	COBie_ElementTypeCOBie_Specification	
ExposureClassification	NATSPEC SpecNATSPEC Spec	
Finish	COBie_ElementTypeCOBie_Specification	Specification of surface finish.
LoadBearing	Pset_PileCommon (IFC4)	Indicates if object is intended to carry loads. Complete value with: TRUE or FALSE (IfcBoolean)
Material	NATSPEC BIMCOBie_ElementType COBie_Specification	
Reinforcement	NATSPEC Spec	
ShearReinforcement	BIM Forum	
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
SteelCoating	NATSPEC Spec	
SteelGrade	NATSPEC Spec	

TimberDensity	NATSPEC Spec	
TimberDurabilityClass	NATSPEC Spec	
TimberEndPreparation	NATSPEC Spec	
TimberSpecies	NATSPEC Spec	
TimberStrengthGroup	NATSPEC Spec	
TimberType	NATSPEC Spec	
Sustainability data		
CarbonFootprint	NATSPEC BIM	
ItemIsNew	NATSPEC BIM	
ItemIsPartiallyRecycled	NATSPEC BIM	
ItemIsRecycled	NATSPEC BIM	
PostConsumerRecycledContent	NATSPEC BIM	
PostIndustrialRecycledContent	NATSPEC BIM	
PreConsumerRecycledContent	NATSPEC BIM	
RecycledContent	NATSPEC BIM	