

UK Government Steel Pipeline

UK Government Indicative Steel Requirement, as at December 2016 for existing and future projects involving steel.

Figures and dates are indicative only, do not represent committed volumes and are subject to change.

TRANSPORT

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Road (Highways England)	M20 Lorry Park	Bridge beams, Reinforcement, Gantry Supports	700 (2016)	Highways England forecast that they will require 17,000 tonnes from 2016 - 2022. These estimates may be subject to design changes.
	M6 Junctions 16-19 Smart Motorway	Gantry Steel	710 (2016)	
		Pile Reinforcement	50 (2016) 150 (2017)	
		Base/FRC Reinforcement	100 (2016) 340 (2017)	
		Steel Sheet Piles	250m ² (2016) 1100m ² (2017)	
		CCTV Masts	63 no (2017)	
Rail	Network Rail	Rail, pipe, rebar, construction	See notes.	175,000 tonnes for electrification programmes from 2016-2021 120,000 tonnes per annum for steel rails 8,000 tonnes of niche steel (likely to be sourced from Europe because product is unavailable in UK)
Rail	High Speed 2	Rebar and prestressing tendons	See notes.	High Speed 2 forecast that 2.03 million tonnes will be needed for phases 1 and 2 from 2020-2025.

DEFENCE

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Defence	Defence Programme Portfolio			<p>Steel is utilised in a range of defence infrastructure and equipment projects, although the defence requirement for steel is relatively small over the next five years and beyond. The majority of this requirement falls to defence infrastructure projects, which are managed by the Defence Infrastructure Organisation (DIO). UK suppliers have already made a significant contribution to defence capabilities, including some 88% of the structural steel for the Queen Elizabeth Class Aircraft Carriers and more than 90% of the steel required for construction of new facilities and the refurbishment of existing facilities to support the Successor submarine programme.</p> <p>From 2016-2021, the DIO is expected to require around 200,000-250,000 tonnes of steel across a number of projects. This is comprised primarily of cold rolled steel sections for structural framing and reinforcing bar for reinforced concrete framing, slabs and foundations.</p> <p>The DIO programme will deliver £3.6Bn of capital works over c300 projects, including: technical, welfare and domestic infrastructure to support the Queen Elizabeth Class Aircraft Carriers, F-35 Lightning II and Maritime Patrol Aircraft, the nuclear deterrent, estate footprint optimisation and Army re-basing programmes.</p> <p>Major defence equipment projects are managed by Defence Equipment & Support. The total steel requirement over the next five years is broadly estimated to be around 20,000 tonnes with additional elements out to 2031, reflecting the long-term nature of some of these projects. Some of this steel requirement will be specialised in nature, due to its specific defence applications. The majority of this requirement falls to maritime projects; ships and submarines.</p> <p>The information below represents current estimated requirements for the top five defence projects in terms of volume (tonnage) of steel required over the next five years. These estimates remain subject to change in terms of tonnage and associated dates.</p>

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Defence	Army Basing Project	Constructional steel	1525 (2016/17) 3500 (2017/18) 7000 (2018/19) 6800 (2019/20) 4130 (2020/21) Total: 22955	The Army Basing Project is delivering facilities for more than 100 Army Units returning from Germany under the Army 2020 programme, at various UK locations.
	Type 26 Global Combat Ship Programme	Majority rolled steel plate	Total: 11400	The Type 26 programme is currently in its demonstration phase. The estimate relates to the initial purchase of steel for the programme.
	Her Majesty's Naval Base Clyde (Faslane)	Constructional steel	898 (2016/17) 2016 (2017/18) 1781 (2018/19) 2563 (2019/20) 3242 (2020/21) Total: 10500	Infrastructure work in support of UK submarine operations.
	International and US Visiting Forces Projects Portfolio	Constructional steel	2298 (2016/17) 2298 (2017/18) 2298 (2018/19) Total: 6894	1. International: A portfolio of capital works being delivered in overseas training estate and defence locations 2. USVF: Medical and Dental Facilities in RAF Croughton 3. Redevelopment Projects: Beacon Barracks Stafford, and Corsham
	Dreadnought Submarine Programme	Specialist Steel	Total: 333	This is the estimated remaining structural steel requirement for the first Dreadnought submarine. The steel requirement for the remaining submarines is subject to contracts to manufacture being agreed.

ENERGY

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Nuclear	Hinkley Point	Rebar	200,000	The project has a large and varied demand for steel. This includes around 200,000 tonnes of reinforcement in the concrete structures, over 600,000 embedment plates, large quantities of structural steelwork for the construction of the turbine halls and other structures, steel containment liners to the two reactor buildings, stainless steel liners to fuel ponds and a thousand kilometres of steel pipework.
		Embedment plates	600,000	
Nuclear Decommissioning	Magnox	Steel sheet for boxes, drums and drum liners	1. Tru-Shield: 252 2. 3M3 Box: 240 3. 3M3 Drum: 14 4. Drum liners: 1000	The steel requirement from 2016-2020 will be in 'specials' rigs, rebar in support structures and waste containers.
		Rebar for boxes and concrete overpack	1. 6M3 Box: 2752 6. Concrete Overpack: 176	
	Low Level Waste Repository	Waste containers	3683 (2016-20)	
		Waste drums	3820 (2016-20)	
	Sellafield	Main B&C - Structural steel (primary)	18180 (2016-20) 21892 (2021-26)	The steel demand is indicated over two 5 year time periods – from 2016-2021; and from 2021-2026. NDA also anticipate some steel requirement in their legacy waste packages at Sellafield.
		Main B&C - Structural steel (secondary)	7272 (2016-20) 8756 (2021-26)	

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Nuclear Decommissioning	Sellafield (continued)	ME&I Installation - Pipework Stainless Steel	643343m (2016-20) 1042110m (2021-26)
		ME&I Installation - Pipework carbon steel	66442m (2016-20) 107625m (2021-26)
		ME&I Installation – Stainless Steel cladding	10102m ² (2016-20) 16364m ² (2021-26)
		ME&I Installation - Ductwork C3 - C5 (nuclear) Stainless	8226m (2016-2020) 13325m (2021-26)
		ME&I Installation - Ductwork C1 - C2 (Building services) Mild/Galvanised	33591m (2016-20) 54411m (2021-26)
		ME&I Installation - Tray / trunking hangers	61696m (2016-20) 999378m (2021-26)
		Waste Cans	5000 (2016-21)
		3M3 box	2200 (2016-21)
		Carbon steel for shield door	3000 (2016-26)
		Stainless Steel for cell cranes	500 (2016-26)
		Carbon steel for cell cranes	1200 (2016-20)

ENERGY: OFFSHORE WIND

Project	Construction start date	Commissioning date	Steel Requirements ¹					
			Foundations		Towers		Sub-Stations	
			Number	Procurement Date	Number	Procurement Date	Number	Procurement Date
FIDeR Walney	2017	2019	82	2016	82	2016	2	2016
Hornsea One	2018	2020/21	170	2017	170	2017	3	2016/17
CFD Round 1 East Anglia 1	2017	2019	102 ²	<u>September 2016:</u> 34 awarded to Navantia <u>October 2016:</u> remaining 68 to be awarded	102 ³	Q1 2017	2 ⁴	Q4 2016
CFD round 2 – successful project (Q1 2017)								
Potential bidders - Moray Firth - Triton Knoll - Hornsea Two	20/21	21/22 & 22/23	62 (est) 112 (est)	2019	62 (est) 112 (est)	2020	2 (est)	2019

¹ Steel could be free issue from developer or from turbine manufacturer. Currently unknown which or whether fabricator will be given freedom to order steel.

² 34 jackets awarded to Navantia in Spain

³ Potential for some UK manufactured towers

⁴ Likely for one sub-station to be awarded to UK

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			150 (est)		150 (est)			
CFD round 3 – successful project (end 2018)⁵								
Potential bidders - East Anglia 3 - Dogger Bank A	Post 2021	No decision taken yet ⁶		n/k		n/k		n/k
CFD round 4 – successful project (2019 or 20)⁷								
Potential bidders - Norfolk Vanguard - East Anglia 2 - Dogger Bank B - Hornsea 3 - Moray Firth West	Post 2021	No decision taken yet		n/k		n/k		n/k

Post 2020 Pipeline

The Government will auction Contracts for Difference of up to £730 million this Parliament for up to 4GW of offshore wind and other less established renewables to be build post 2020. A 500MW offshore wind farm would need somewhere between 80,000 and 120,000 tonnes of steel depending on water depth, ground conditions and whether monopiles or jacket foundations are used. It is reasonable to assume at least one offshore wind farm of around 500MW will secure a CFD in each CFD auction round. The size of the wind farm will depend on cost reduction and the agreed strike price. On completion of each allocation round we will be able to provide details on the size on the steel requirements and timelines of the winning bid.

⁵ Timing of 3rd round unknown and subject to Ministers decisions, assumptions made on basis of 3 rounds this Parliament.

⁶ Delivery years for rounds 3 and 4 will end in 25/26. Unknown what delivery years will be applicable for these rounds as subject to Ministerial decisions.

⁷ As per reference 5, timing of 4th round uncertain and subject to Ministerial decisions.

SCIENCE & RESEARCH

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
British Antarctic Survey	Construction Contracting Partner for the Natural Environment Research Council (NERC) and the British Antarctic Survey	Construction	TBC	<p>This project will appoint a construction contracting partner for NERC/BAS projects in the Antarctic and elsewhere where NERC operates.</p> <p>The Construction Partner requirement is yet to complete and this is anticipated in December.</p>
	Polar Research Vessel	Rolled plate	4400	
		Other steel products	1100	

ENVIRONMENT

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Environment Agency	Boston Barrage Barrier Works	Steel Sheet piling	To be confirmed	Under design, anticipate large flood gates, construction forecast to begin in 2018.
	Lincolnshire and Northamptonshire Area Package	To be confirmed	To be confirmed	In each area, a number of schemes are being packaged as one tender exercise. These will be design and build contracts, and as such the steel requirements in each area are subject to further design decisions. We anticipate further information will be available during 2017.
	Staffordshire, Warwickshire and West Midlands Design & Build and Construction Package			
	Essex, Norfolk and Suffolk Area Package			
	Dorset & Coastal Design & Build Package			
	River Roch, Rochdale and Littleborough	To be confirmed	To be confirmed	The schemes in these areas are each in an appraisal stage. The steel requirements expect to be finalised shortly with construction beginning during 2017-2018
	Anglian Coastal Package			
	Lewisham and Catford Flood Alleviation Scheme			

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Environment Agency	Oxford Flood Alleviation Scheme			
	Staffordshire, Warwickshire and West Midlands Construction Package	To be confirmed	To be confirmed	A number of schemes are being packaged under a single construction contract. The steel requirements are subject to further design decisions, and we anticipate further information to be available in 2018.
	Avonmouth Severnside Flood Defences Package	To be confirmed	To be confirmed	A number of schemes are being packaged under a single construction contract. The steel requirements are subject to further design decisions, and we anticipate further information to be available in 2019.

EDUCATION

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Schools (Education Funding Agency)	Projects are either part of the Priority School Build Programme (PSBP) or the Free Schools Programme. These are delivered through the Contractors Framework, Regional Framework, and Modular Framework or through Local Delivery.			
	The projects identified in the pipeline are procured on a design and build basis with the contractors doing the design of the schools. As such, it is not possible to provide information about the possible steel element of the projects. Analysis of previous projects indicates that the steel content for a typical project may range from between 3 – 8% of capital value.			
	Contractors Framework - PSBP	-	-	EFA forecast for their capital spend programme: 3 projects (£34.8m, 2016) 27 projects (£351m, 2017)
	Contractors Framework – Free Schools	-	-	EFA forecast for their capital spend programme: 3 projects (£66m, 2016)
	Regional Framework – PSBP	-	-	EFA forecast for their capital spend programme: 18 projects (£90m, 2016) 30 projects (£236m, 2017)
	Regional Framework – Free Schools	-	-	EFA forecast for their capital spend programme: 10 projects (£62m, 2016) 42 projects (£146m, 2017)
	Modular Framework – PSBP	-	-	EFA forecast for their capital spend programme: 15 projects (£35.0m, 2016) 10 projects (£21.9m, 2017) 19 projects (£49.6m, 2018)
	Local Delivery - PSBP	-	-	EFA forecast for their capital spend programme: 42 projects (£99.5m, 2016) 28 projects (£27.5m, 2017)

JUSTICE

Sector	Project	Steel requirements (products)	Steel requirements (tonnage)	Notes
Prisons	Prison Estate Reform Programme	Construction, rebar	13,500 estimated	The construction methodology and design are under development.
	Apollo House Croydon	Construction	TBC	
Immigration	Brook and Tinsley House	TBC		