

# **Appendix 1.6 Phased Approach Briefing Note**



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Project Name:	<b>Tata Steel Port Talbot</b>	Date:	<b>12 March 2014</b>
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Subject:	<b>Project Sequencing / Phasing &amp; Design Parameters</b>		

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## Introduction

As part of the Scoping Report and Preliminary Environmental Information Report (PEIR), the proposed development will consist of up to two turbines, up to two boilers and up to two stacks. The maximum buildings parameters have been included within Chapter 3 of the PEIR, entitled Project Description. The PEIR is currently subject to formal consultation until 14<sup>th</sup> March 2014.

As the project has moved forward, Tata Steel UK Ltd is exploring the potential to deliver the project over two construction phases as opposed to the single phase approach currently described in the PEIR. If the two phase approach represents a commercially viable option, the assessment of impact of the alternative approach will need to be presented within the ES submitted in support of the DCO application for a DCO. Critically, a decision on the viability of the 2 phase approach has yet to be taken by Tata, however, background assessment work is being undertaken to understand the deliverability of the alternative approach and how it will be assessed and presented in the submitted Environmental Statement. Tata is advising NPTCBC / NRW on the alternative construction approach at an early stage in the investigations. We would welcome any initial comments that NPTCBC / NRW have on the approach suggested.

This project briefing note has been prepared to assist in that process and outlines the proposed two phase approach which will be tested within the EIA. This does not, however, form part of the formal consultation process being conducted under s42 of the 2008 Planning Act. The approaches being considered are known as Option 1 and Option 2 and the proposed construction and operational phasing is outlined below:

### Option 1 – Single Phase Installation (Two Boilers and Two Turbines)

This is the existing scenario currently being tested under the EIA. This involves both boiler and turbine units being installed and constructed at the same time.

Construction timescale remains at 36 months with commissioning phase at 6 months. The existing power generation equipment (4 boilers and 3 turbo alternators) would be decommissioned once the new equipment is in reliable and continuous operation.

Summary of Project Description Components for Single Phase Build	
Item	Indicative and Maximum Dimensions
Height of Stacks	Two stacks, both at 80m
Cooling Towers	Up to 22m high x 160m long x 16m wide
Turbine Hall	Up to 25m high x 55m long x 65m wide
Boiler House	Up to 35m high (at apex) x 60m long x 65m wide
Electrical Connection	66kv cables, 2.8km in length to be run underground, off existing above ground infrastructure or a combination of both
Switchgear Station	Up to 35m long x 55m Wide

## **Option 2 – Two Phase Installation (One Boiler and One Turbine at a time)**

This is an alternative scenario where the project components (boiler and turbine units) are installed in two phases - (i.e. one boiler and one turbine at a time). The first installation would be after the Development Consent Order (DCO) is made and the second installation at a later stage (which could be up to 10 years later).

During the interim period of the first and second installations, the existing power generation equipment would be operational and only be decommissioned once the second installation is complete and within reliable continuous operation. As the existing 4 boilers and 3 turbo alternators would not be decommissioned until this second installation, the existing emissions, abstractions and discharges would still occur during this interim period.

The flared gas, however, would be significantly reduced as per Option 1 as the first boiler (installed at Phase 1) would take all the gas which otherwise would be flared – therefore there would be immediate improvements as per Option 1. The second boiler will then take the capacity of the decommissioned units at the appropriate time.

Construction timescales will be 36 months for first installation (as per Option 1) and then 24 months for the second installation. The full building footprint of the switchgear station will be built but only sufficient building envelopes to house one boiler and one turbine will be constructed in the first construction phase. The ground will be prepared for the second boiler and turbine unit but with no above ground structures. The cable route will still be fully installed as per Option 1.

When the second installation is to commence, the extended turbine housing and second boiler housing will be constructed immediately alongside the existing boiler and turbine. In order to minimise noise impact of the operating turbine, the wall, which will separate the two turbine units, will not be removed until all the second installation is complete. This wall will only consist of the external cladding and appropriate insulation, hence, no demolition of brickwork is required and the dust can be controlled through existing best practice methods as it will be contained within the new building envelope.

Around 50% of the total cooling towers infrastructure will be constructed in the first installation with the remaining being constructed during the second installation.

The second stack will only be installed at Phase 2 when the second boiler unit is constructed. The boiler and the turbine housings will be extended to incorporate the second boiler and turbine up to the dimensions outlined in Option 1. Construction workforce will be similar to first installation (500 at peak) but over a shorter construction period. There will be no change in operational workforce.

The same delivery routes will be used. It is assumed that the second turbine and boiler building will be to the north of the first installation. The temporary laydown area will remain the same for both installations.

The project components are summarised in the table overleaf.

Summary of Project Description Components for Phased Build		
Item	First Installation	Second Installation
Height of Stacks	One 80m stack	One 80m stack
Cooling Towers	Up to 22m high x 80m long x 16m wide	Up to 22m high x to take structure to maximum length as in option 1 long (160m) x 16m wide
Turbine Hall	Up to 25m high x 55m long x - 45m wide	Up to 25m high x 55m long x to take building to maximum width as in option 1 (65m)
Boiler House	Up to 35m high (at apex) x 60m long x 45m wide	Up to 35m high (at apex) x 60m long to take building to maximum width as in option 1 (65m)
Electrical Connection	66kv cables, 2.8km in length to be run underground, off existing above ground infrastructure or a combination of both to be installed wholly as part of the first installation	
Switchgear Station	Up to 35m long x 55m Wide to be installed as part of first installation	

It is assumed that the 35 years life cycle will start from first installation.

Topic	Additional Assessment
Chapters 1 – 4 Introductory Chapters	<ul style="list-style-type: none"> <li>Information added in project description and project evolution regarding Option 2</li> </ul>
Chapter 5 Air Quality	<ul style="list-style-type: none"> <li>New AQ modelling scenarios for the phased approach associated with Option 2 i.e. Phase 1: one emission point and interim scenario. For Phase 2: the decommissioning and second installation scenario is as per Option 1.</li> <li>Additional air quality assessment for construction during Phases 1 and 2 of Option 2 due to phased approach to construction.</li> </ul>
Chapter 6 Ecology	<ul style="list-style-type: none"> <li>No change to the existing ecology surveys</li> <li>Habitats Regulations Assessment will be updated using information from second air quality modelling scenarios</li> </ul>
Chapter 7 LVIA	<ul style="list-style-type: none"> <li>New LVIA photomontages for Phase 1 of Option 2 to account for one stack and for smaller building sizes. The completed development following Phase 2 will be as assessed under Option 1 (single phase installation).</li> </ul>
Chapter 8 Noise	<ul style="list-style-type: none"> <li>New noise modelling scenarios for Option 2 i.e. Phase 1: first installation and interim scenario. For Phase 2: the decommissioning and second installation scenario is as per Option 1.</li> <li>Additional noise assessment for construction phase in Phase 2 of Option 2.</li> </ul>
Chapter 9 Ground Conditions	<ul style="list-style-type: none"> <li>No change to study as all ground preparation work will be completed in Phase 1 of Option 2</li> </ul>
Chapter 10 Traffic & Transportation	<ul style="list-style-type: none"> <li>New scenarios will be assessed for the phased approach of Option 2 i.e. the installation scenarios for construction of Phases 1 and 2 will be assessed. No change for operational phase.</li> </ul>
Chapter 11 Cultural Heritage & Archaeology	<ul style="list-style-type: none"> <li>Aligned to LVIA scenarios</li> </ul>
Chapter 12 Socio-economics	<ul style="list-style-type: none"> <li>New scenarios will be assessed for the phased approach of Option 2 i.e. Phase 2: Assess second installation scenario for construction No change to operational phase</li> </ul>
Chapter 13 Flood risk	<ul style="list-style-type: none"> <li>No change to study as all ground preparation work will be completed in phase 1 of Option 2.</li> </ul>
Chapter 14 Surface Water Environment	<ul style="list-style-type: none"> <li>New water balance model scenarios to reflect the phased approach of Option 2 i.e. Phase 1: first installation and interim scenario. For Phase 2: the decommissioning and second installation scenario is as per Option 1.</li> </ul>
Chapter 15 Environment & Waste Management	<ul style="list-style-type: none"> <li>Consideration of second construction phase in Phase 2 of Option 2.</li> </ul>
Chapter 16 Cumulative Assessment	<ul style="list-style-type: none"> <li>Will have to take account of further projects developments which are in planning now but are not consented. Can be minimised due to scale of works</li> </ul>

This table provides how the current assessment will be amended to take account of this scenario.