The Progress Power (Gas Fired Power Station) Order

APPLICATION TO MAKE A NON MATERIAL CHANGE TO THE PROGRESS POWER (GAS FIRED GENERATING STATION) ORDER

Application

Planning Act 2008

THE INFRASTRUCTURE PLANNING (CHANGES TO, AND REVOCATION OF, DEVELOPMENT CONSENT ORDERS) REGULATIONS 2011

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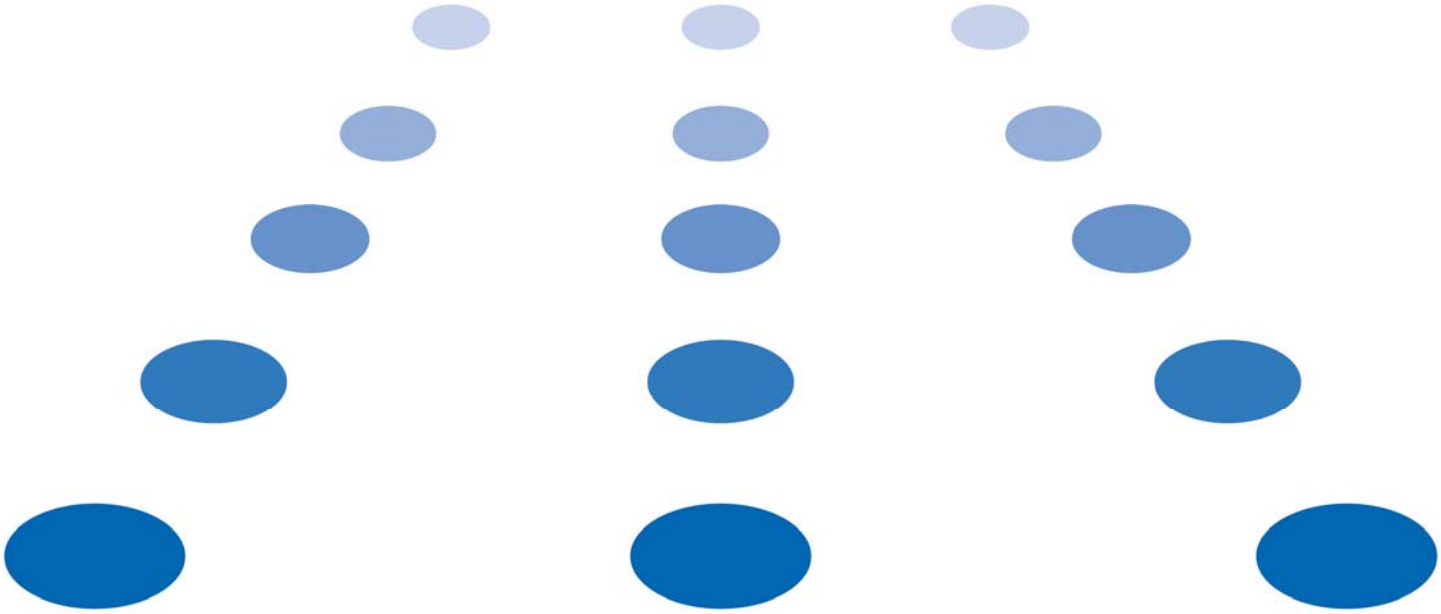

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1. INTRODUCTION

1.1 Progress Power Limited ("**PPL**") of registered address 33, Cavendish Square, London, W1G 0PW, is the named undertaker in, and was the applicant for, The Progress Power (Gas Fired Power Station) Order 2015 (statutory instrument 2015 No. 1570), which was made on 23 July 2015. This was subject to the Progress Power (Gas Fired Power Station) (Correction) Order 2016 (statutory instrument 2016 No. 736), made on 11 July 2016 (both together referred to herein as the "**Order**").

1.2 The Order was made pursuant to Sections 114, 115 and 120 of the Planning Act 2008 (the "**2008 Act**"), with the reasons for making the Order contained in the Secretary of State's letter dated 23 July 2015.

1.3 The Order grants development consent for the construction, operation and maintenance of a generating station with a gross rated electrical output of up to 299 MWe comprising up to five gas turbine generators ("**GTG**"), up to five exhaust gas emission flue stacks and other development that is part of the generating station (referred to in the Order as the "**authorised development**"). Such authorised development includes integral gas and electrical cable connections and associated development comprising an electrical connection compound, made up of a substation and sealing end compound, an access road and a new road junction off the A140. The authorised development is described in Schedule 1 to the Order, split out into numbered works.

1.4 The Order also authorises the compulsory acquisition of land required for the authorised development, as well as land that is required to facilitate or is incidental to the authorised development.

1.5 The authorised development would be located on land at the former Eye Airfield located in Eye, Mid Suffolk. The entire project lies within the administrative boundary of Mid-Suffolk District Council and within the parishes of Eye and Yaxley. The location of the authorised development is shown on the Lands Plans (Revision 1.0, Document Reference 2.6) and the various components that comprise the authorised development are shown on the Works Plans (Revision 1.0, Document Reference 2.7).

1.6 PPL has interests in the land subject to the Order; pursuant to an option agreement for (1) that part of the Order land on which the Power Generation Plant is to be located (Works numbered 1 and 2 in the Order) (2) part of the gas connection and (3) part of the electrical connection.

1.7 PPL has not yet concluded the exact number of turbines that will be constructed (the Order permits up to five GTGs). Nonetheless, through the procurement process for the purchase of the necessary equipment, it has become apparent that in order to construct the single GTG scenario, minor alterations need to be made to some of the parameters and locations of various structures consented by the Order.

1.8 PPL hereby applies to the Secretary of State pursuant to Section 153 and paragraph 2 of Schedule 6 of the 2008 Act to make changes to the Order that are not material (the "**NMC Application**"). The NMC Application is subject to the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011, as amended (the "**Changes Regulations**").

1.9 Part One of this document sets out the proposed non-material amendments to the Order sought by PPL and the rationale for doing so. Part Two explains why the changes that are requested have either a negligible or non-material effect upon the environment.

1.10 This document complies with Regulation 4 of the Changes Regulations.

PART ONE PROPOSED NON MATERIAL CHANGES TO THE ORDER

2. CONSULTATION AND PROCESS AS DESCRIBED BY THE CHANGES REGULATIONS

2.1 PPL will submit a Consultation and Publicity Statement, confirming PPL's compliance with Regulations 6 and 7 of the Changes Regulations in respect of the NMC Application. In summary, the following has, or is being, undertaken by PPL:

2.1.1 PPL notified PINS of the NMC Application on 30th June 2016.

2.1.2 PPL is publicising the NMC Application in East Anglian Daily Times (being a newspaper local to the site of the authorised development) on 19th August 2016 and 26th August 2016, being two successive weeks. Copies of these notices will be included in the Consultation and Publicity Statement.

2.1.3 PPL sought the written consent of the Secretary of State pursuant to Regulation 7(3) of the Changes Regulations to consult a smaller body of consultees in respect of the NMC Application than would otherwise be required pursuant to Regulations 7(1) and (2) of the Changes Regulations. The request was sent to the Secretary of State on 11th July 2016, with the Secretary of State responding on 25th July 2016. The Secretary of State's response, and list of consultees PPL is therefore required to consult, is contained in Appendix One to this document.

2.1.4 Accordingly, PPL is consulting those persons identified in the Secretary of State's response. A copy of the notices sent to these consultees will be included in the Consultation and Publicity Statement.

3. PROGRESS POWER (GAS FIRED POWER STATION) ORDER 2015

3.1 The Order consists of 40 operative provisions, each referred to as articles, and 11 Schedules.

3.2 Schedule 1 describes the authorised development. It consists of numbered works 1 to 7. Those numbered works correlate with the Works Plans (Document Reference 2.7). The numbered works are replicated below for ease of reference:

Work No. 1 *– a simple cycle gas fired peaking power generating station on the site of the former Eye airfields in Eye, Mid Suffolk with a gross rated electrical output of up to 299MWe comprising—*

Work No. 1A*—*

(a) up to 5 gas turbine generators; and

(b) up to 5 exhaust gas emission flue stacks,

Work No. 1B*—*

(a) an administration building;

(b) a store;

(c) a control room/office/workshop;

(d) telemetry apparatus;

(e) a black start diesel generator;

(f) a raw/fire water tank and demineralised water storage tank;

(g) a natural gas receiving station and gas treatment compound containing—

(i) a pipeline inspection gauge (PIG) receiving facility;

(ii) isolation valves, metering, heating, filtering, compression, pressure regulation equipment;

(iii) electricity supply kiosk; and

(iv) control and instrumentation kiosks,

Work No. 1C *– a switchyard / banking compound containing up to seven transformers, switchgear building and other plant required to manage the transmission of electricity,*

Work No. 1D*—*

(a) security infrastructure, including cameras, perimeter fencing and a gatehouse;

(b) site lighting infrastructure, including perimeter lighting columns;

(c) internal roadways, car parking, pedestrian network, cycle parking, hardstanding and water treatment trailers;

(d) site drainage, attenuation pond and waste management infrastructure;

(e) electricity, water, wastewater and telecommunications and other services;

(f) landscaping including tree planting, fencing and other boundary treatments and ecological mitigation;

(g) high voltage and low voltage cabling, equipment and controls and associated telemetry and electrical protection auxiliary cabling;

(h) underground gas pipeline connection, associated telemetry and cathodic protection test / transformer rectifier unit;

(i) other ancillary equipment; and

(j) new means of accesses from Potash Lane including permanent road surface, drainage, gates and fencing,

***Work No. 2**—*

(a) a maintenance compound including new hardstanding,

(b) landscaping including tree planting, fencing and other boundary treatments; and

(c) site drainage,

Associated development within the meaning of section 115(2) of the 2008 Act in connection with the nationally significant infrastructure project referred to in Work No. 1 comprising—

***Work No. 3A**—*

(a) an above ground installation (also referred to as a minimum offtake connection compound) containing—

(i) a minimum offtake connection comprising remotely operable valves, control and instrumentation kiosks and electrical supply kiosks;

(ii) a pipeline inspection gauge (PIG) facility, comprising a PIG launching facility, emergency control valves, isolation valves, control and instrumentation kiosks, and electricity supply kiosks;

(b) security infrastructure, including cameras, lighting (including perimeter lighting columns) and perimeter fencing;

(c) site drainage and waste management infrastructure;

(d) electricity and telecommunications connections and other services;

(e) below ground sacrificial anode pit; and

(f) landscaping including tree planting, fencing and other boundary treatments and ecological mitigation,

***Work No. 3B** – new means of access between Potash Lane and numbered work 3A, including signing and road markings works, permanent road surface, gates, fencing, drainage, infilling, landscaping and tree and hedge removal and other incidental works,*

***Work No. 4**—*

(a) a new underground gas pipeline connection and telemetry cabling, approximately 1.7 km in length connecting the natural gas receiving station and gas treatment compound in Work No. 1B to Work No. 3A;

(b) pipeline field marker posts and cathodic protection test/ transformer rectifier unit;

(c) below ground drainage works;

(d) tree and hedge removal; and

landscaping including tree planting, fencing and other boundary treatments and ecological mitigation.

***Work No. 5**—*

(a) 400 kV substation and site office and welfare accommodation;

(b) 400 kV cable sealing end compound;

(c) underground high voltage electrical cables and associated telemetry and electrical protection auxiliary cabling;

(d) security infrastructure including perimeter fencing with gates, security cameras and site lighting;

(e) landscaping including bunds, tree planting, fencing and other boundary treatments and ecological mitigation;

(f) site drainage and waste management infrastructure; and

(g) internal roadways, car parking, pedestrian network and hardstanding for planned maintenance.

Work No. 6—

(a) an underground 400 kV electrical cable circuit and associated telemetry and electrical protection auxiliary cabling, approximately 1.6 km in length; and

(b) joint bays in relation to Work No. 6a.

***Work No. 7** – new means of access between Work No. 5 and the A140 including road widening, new turning lane, signing and road markings works, permanent road surface, gates, fencing, drainage, infilling, landscaping and tree and hedge removal and other incidental works,*

In connection with Works No. 1 to 7, and to the extent that they do not otherwise form part of any such works, further associated development comprising such other works or operations as may be necessary or expedient for the purposes of or in connection with the construction, operation and maintenance of the works in this Schedule whether or not shown on the plans referred to in the Requirements falling within the scope of the works assessed in the environmental statement.

3.3 Schedule 2 contains the Requirements. Requirement 3 relates to Detailed Design, and stipulates that the authorised development must be carried out in accordance with:

3.3.1 the Works Plans;

3.3.2 the Rights of Way, Streets and Access Plan (Revision One, Document reference 2.8); and

3.3.3 the parameters specified in Table 2 of Requirement 3.

3.4 Pursuant to Article 3(2) of the Order, each numbered work identified in Schedule 1 of the Order must be situated within its corresponding numbered work area shown on the Works Plans. These numbered work areas are maximum limits of deviation, therefore the numbered work can be situated anywhere within its numbered work area identified on the Works Plans.

3.5 The numbered works must then be constructed within the parameters set by Table 2 in Requirement 3 of Schedule 2. For ease of reference, these parameters are replicated below:

Structure	Parameters (in respect of height, metres above existing site level of approximately 48.5 metres AOD)
Each gas turbine generator (where one or two gas turbine generators are constructed) (Part of numbered work 1A)	Maximum height: 19 metres Maximum length: 30 metres Maximum width: 30 metres
Each gas turbine generator (where three, four or five turbine generators are constructed) (Part of numbered work 1A)	Maximum height: 10 metres Maximum length: 36 metres Maximum width: 23 metres
Each exhaust gas emission flue stack (where one or two gas turbine generators are constructed) (part of numbered work 1A)	Maximum height: 30 metres Minimum height: 25 metres Maximum width: 8.4 metres
Each exhaust gas emission flue stack (where three, four or five gas turbine generators are constructed) (part of numbered work 1A)	Maximum height: 30 metres Minimum height: 25 metres Maximum width: 6 metres
Control room/office/workshop (part of numbered work 1B)	Maximum height: 6 metres Minimum length: 29 metres Maximum width: 23 metres
Black Start diesel generator (part of numbered work 1B)	Maximum height: 5 metres Minimum length: 13 metres Maximum width: 5 metres
Raw/fire water tank (part of numbered work 1B)	Maximum height: 11 metres Minimum length: 11 metres Maximum width: 11 metres
Demineralised water tank (part of numbered work 1B)	Maximum height: 2 metres Maximum length: 2 metres Maximum width: 2 metres

Structure	Parameters (in respect of height, metres above existing site level of approximately 48.5 metres AOD)
Gas receiving station (part of numbered work 1B)	Maximum height: 3 metres Maximum length: 50 metres Maximum width: 46 metres
Switchyard/ banking compound (numbered work 1C)	Maximum height: 11.3 metres Maximum length: 60 metres Maximum width: 60 metres
Switchgear Building (part of numbered work 1C)	Maximum height: 11.3 metres Maximum length: 21 metres Maximum width: 15 metres
Gatehouse (part of numbered work 1D)	Maximum height: 4.5 metres Maximum length: 9 metres Maximum width: 8 metres
Above ground installation (numbered work 3A)	Maximum height: 3 metres Maximum length: 72 metres Maximum width: 52 metres
Pipeline inspection gauge facility (part of numbered work 3A)	Maximum height: 2 metres Maximum length: 36 metres Maximum width: 27 metres
Minimum offtake connection (part of numbered work 3A)	Maximum height: 2 metres Maximum length: 36 metres Maximum width: 25 metres
Sealing end compound (part of numbered work 5)	Maximum height: 12.5 metres Maximum length: 22 metres Maximum width: 45 metres
Substation: (gas insulated substation) – (maximum compound size) (part of numbered work 5)	Maximum height: 12.5 metres Maximum length: 80 metres

Structure	Parameters (in respect of height, metres above existing site level of approximately 48.5 metres AOD)
	Maximum width: 100 metres
Substation: (gas insulated substation) – (indoor switchgear hall) (part of numbered work 5)	Maximum height: 12.5 metres Maximum length: 21 metres Maximum width: 62 metres

4. PROPOSED CHANGES TO THE ORDER

4.1 The proposed changes to the Order, and why they are needed, are described below.

4.2 Change One: Parameters of the gas turbine generator (part of numbered work 1A)

4.2.1 A structure known as a diffuser forms part of the GTG. The exhaust gas system guides the exhaust gas from the GTG through the diffuser to the flue stack. It also acts as a noise insulator from noise emitted by the GTG. For the one GTG scenario, the parameters of the GTG contained in Schedule 1 of the Order need to be amended in order to accommodate the additional length created by the addition of the diffuser element of the GTG.

4.2.2 In addition, a lube oil system is also attached to the GTG. This increases the width of the GTG by an additional 10 metres. This lubrication system, complete with tank, pumps, coolers, filters, valves and various control and protection devices, furnishes normal lubrication and absorption of heat rejection load of the gas turbine. Lubricating fluid is circulated to the three main turbine bearings, generator bearings, and to the turbine accessory gear and fuel pump. Also, lubricating fluid is supplied to the starting means torque converter for use as hydraulic fluid as well as for lubrication. Additionally, a portion of the pressurized fluid is diverted and filtered again for use by hydraulic control devices as control fluid.

4.2.3 In summary, for **the one GTG solution only,** there is a need to increase the length of the GTG from a maximum of 30 metres to 50 metres to accommodate the diffuser system elements of the GTG and the width from a maximum of 30 metres to 40 metres to accommodate the lube oil system. This would involve a change to Table 2 in Requirement 3, Schedule 2 of the Order. However, there would be no change in the overall footprint of the Power Generation Plant as

shown in Figures 5 and 6 of the Environmental Report (see Appendix Two).

4.2.4 This change is non-material because:

Whilst there would be an increase in the footprint of the GTG in the one GTG scenario, the footprint of each GTG in the five GTG scenario would not increase. The footprint of the single GTG would therefore still be smaller overall than the five GTG scenario.

Figures 1, 2, 4, 5 and 6 of the Environmental Report show the proposed single GTG scenario and the proposed changes. The screening exercise set out in Chapter 4 of the Environmental Report identifies the potential for a change in the environmental effects predicted in the Environmental Statement ("**ES**") for landscape and visual effects and air quality.

The updated assessment for landscape and visual effects (Chapter 5 of the Environmental Report) has concluded that the potential significance of effects associated with the proposed changes are no greater than those previously assessed for the Project. No significant landscape effects are predicted to arise at operation. There would be no material change to the character of the view from the ES viewpoint locations that relate specifically to the Power Generation Plant. The magnitude and significance of impact would be lower than for the realistic worst case (five GTG scenario) reported in the ES. No significant visual effects are predicted to arise at operation. Potential cumulative landscape or visual effects in relation to the Power Generation Plant site would be the same as the original ES.

The updated assessment for air quality (Chapter 6 of the Environmental Report) has concluded that overall, the Project, with the proposed changes, will continue to have a negligible likely impact on air quality in relation to both human and ecological receptors during construction, operation and decommissioning. This applies both for the Project alone and in combination with other proposed facilities in the vicinity of the Project site.

4.3 <u>Change Two: Parameters of the Flue Stack (part of numbered work 1A)</u>

4.3.1 The flue stack consists of a lower and an upper stack section. For the single GTG scenario, the lower section, being that part of the flue stack up to a height of 30 metres, is thicker (and therefore wider) than the upper section of the flue stack. This is because the lower stack section consists of greater layers of casing, which is self-supporting, and insulation.

4.3.2 At present, the Order does not account for this difference in width between the two sections of the flue stack. Accordingly, there is a need to increase the width of the flue stack from 8.4 metres to 11 metres up to and including a height of 16.5 metres AOD and from 8.4 metres to 10 metres thereafter to a height of 30 metres. The increase in the stack width for the upper section is required to enable the GTG to meet the noise limits under the Development Consent Order through the inclusion of a silencer. This would involve a change to Table 2 in Requirement 3, Schedule 2 of the Order.

4.3.3 This change is non-material because:

The visible stack height from each of the key viewpoint locations does not change, and this element would be less noticeable than the approved scheme comprising a row of up to 5 flue stacks of the same height.

Figures 1, 2, 4, 5 and 6 of the Environmental Report show the proposed single GTG scenario and the proposed changes.

The screening exercise set out in Chapter 4 of the Environmental Report identifies the potential for a change in the environmental effects predicted in the ES for landscape and visual effects and air quality.

Chapter 4 also states that the effects of the proposed changes on the impact on the setting of Eye Castle and Eye Conservation Area have been reviewed and the conclusion is that there would be no different likely significant environmental effects to those previously reported.

An updated assessment for landscape and visual effects (Chapter 5 of the Environmental Report) has concluded that the potential significance of effects associated with the proposed changes are no greater than those previously assessed for the approved Project. No significant landscape effects are predicted to arise during operation. There would be no material change to the character of the view from the ES viewpoint locations that relate specifically to the Power Generation Plant. The assessed magnitude and significance of impact would be lower than the realistic worst case (five GTG scenario) reported in the ES. No significant visual effects are predicted to arise at operation. Potential cumulative landscape or visual effects in relation to the Power Generation Plant site would be the same as the original ES.

An updated assessment for air quality (Chapter 6 of the Environmental Report) has concluded that overall, the Project, with the proposed changes, will continue to have a negligible likely impact on air quality in relation to both human and ecological receptors during construction, operation and

decommissioning. This applies both for the Project alone and in combination with other proposed facilities in the vicinity of the Project site.

4.4 Change Three: Black Start Diesel Generator (part of numbered work 1B)

4.4.1 The application for the authorised development assessed a realistic worst case scenario, which involved an assessment of up to five GTGs.

4.4.2 As one GTG is larger in capacity than the individual capacity of, say, five smaller GTGs, more than one black start diesel generator would be required to start up a generating station with a single GTG. Where two or more GTGs are constructed, as the GTG would be smaller in capacity, a single black start diesel generator can be used to start each GTG individually. In total, three black start diesel generators would be needed in the single GTG scenario only.

4.4.3 The size of the black start diesel generator is also slightly longer than originally predicted; the length of each generator is 4 metres longer, meaning that the parameters need to increase from 13 metres to 17 metres. This applies to all GTG scenarios.

4.4.4 In summary:

in the **single GTG scenario only**, the number of black start diesel generators needs to increase from one to three. This would involve an amendment to Schedule 1 of the Order; and

in **all GTG scenarios** the size of the black start diesel generators needs to increase in length from 13 metres to 17 metres. This would involve a change to Table 2 in Requirement 3, Schedule 2 of the Order.

4.4.5 This change is non-material because:

The increase in the number of black start diesel generators with the single GTG scenario compared to the single generator with the five GTG scenario means that the footprint of the black start generators will increase. However, due to other changes, the overall area of the Power Generation Plant will not increase.

Figures 1, 2, 4, 5 and 6 of the Environmental Report show the proposed single GTG scenario and the proposed changes.

The screening exercise set out in Chapter 4 of the Environmental Report identifies the potential for a change in the environmental effects predicted in the Environmental Statement. No change in impacts is predicted as a result of these changes for each of the environmental topics considered. In respect of air quality there will be no change in

emissions as a result of the change which will also not affect any ecological receptors. There will be no change in noise and vibration levels. The change will not affect any heritage assets.

The proposed changes to the black start diesel generators are not considered to affect landscape or visual impacts given they are low level structures (5 metres). A change of 4 metres is de-minimus and would not be noticeable in the context of the built infrastructure (see Chapter 5 of the Environmental Report).

4.5 Change Four: Natural gas receiving station and gas treatment compound (part of numbered work 1B)

4.5.1 Whilst the final gas filter (which forms part of the of natural gas receiving station) can be constructed as part of the prescribed parameters of the Order set out in Table 2 of Requirement 3 of Schedule 2 to the Order, there is a requirement for there to be a separation distance between the various filter mechanisms to allow a flow of natural gas. The separation distance is required between the natural gas receiving station and the gas treatment compound. The buffer volume is provided in the gas piping downstream of the gas receiving station to ensure a smooth switch-over to the stand-by regulator within the allowable pressure gradients, should the safety shut off valve or the operating regulator close.

4.5.2 The gas treatment compound with the block and vent valve needs to be positioned as close as possible to the GTG, in order to reduce the piping between the final filter and the GTG.

4.5.3 For all GTG scenarios, two smaller compounds, rather than one larger compound, are therefore needed in order to accommodate the separation of the natural gas receiving station from the gas treatment compound.

4.5.4 The total area for the compound currently consented by the Order is 50 metres x 46 metres; a total of 2,300 square metres.

4.5.5 The dimensions for two smaller compounds add up to 2,264 square metres in total, with the following dimensions:

Compound 1 – Natural Gas Receiving Station (5 metres (height), 50 metres (length) and 36 metres (width));

Compound 2 – Gas Treatment Compound (5 metres (height), 29 metres (length) and 16 metres (width)).

4.5.6 This would involve a change to Table 2 in Requirement 3, Schedule 2 of the Order.

4.5.7 This change, therefore, involves a reduction in the built footprint.

4.5.8 This change is non-material because:

The natural gas receiving station and gas treatment compound will have a smaller overall footprint than the footprint permitted in the Order (being referenced as the gas receiving station in Table 2 of Requirement 3, which for the avoidance of doubt is a reference to natural gas receiving station and gas treatment compound).

Figures 1, 2, 4, 5 and 6 of the Environmental Report show the proposed changes.

The screening exercise set out in Chapter 4 of the Environmental Report identifies the potential for a change in the environmental effects predicted in the Environmental Report. No change in impacts is predicted as a result of these changes for each of the environmental topics considered.

The proposed changes to the natural gas receiving station and gas treatment compound are not considered to affect landscape or visual impacts given they are low level structures and there would be an overall reduction in the total footprint (see Chapter 5 of the Environmental Report).

4.6 Change Five: Fin fan cooler (numbered work 1D(i))

4.6.1 The realistic worst case scenario of five GTGs and five stacks at 30m assessed in the ES accounted for GTG cooling with a built in cooling system within each GTG. This design is common for smaller GTGs. Throughout the original ES, the assessment of the GTG considered the built-in cooling system.

4.6.2 For a single GTG, the cooling system is not contained within the GTG but is in a standalone structure (Fin Fan Cooler) to allow for a closed water cooling system and to transfer the heat produced by the generator coolers and the gas turbine / generator lube oil system via the fin fan cooler to the ambient air.

4.6.3 The Fin Fan Cooler required for the single GTG scenario would be 13m long, 10m wide and 6m high.

4.6.4 Even with a stand alone Fin Fan Cooler, the total built footprint of the single GTG scenario is smaller than the larger consented five GTG scenario (see Figures 5 and 6 of the Environmental Report).

4.6.5 This would involve an amendment to Schedule 1 of the Order and a change to Table 2 in Requirement 3, Schedule 2 of the Order for the single GTG scenario.

4.6.6 This change is non-material because:

Whilst there would be an increase in the footprint of the GTG in the one GTG scenario, even with a stand alone Fin Fan Cooler, the total built footprint of the single GTG scenario is smaller than the larger consented five GTG scenario (see Figures 5 and 6 of the Environmental Report).

Figures 1, 2, 4, 5 and 6 of the Environmental Report show the proposed single GTG scenario and the proposed changes. The screening exercise set out in Chapter 4 of the Environmental Report identifies the potential for a change in the environmental effects predicted in the ES for landscape and visual effects and air quality. The updated assessment for air quality (Chapter 6 of the Environmental Report) has concluded that overall, the Project, with proposed changes, will continue to have a negligible likely impact on air quality in relation to both human and ecological receptors during construction, operation and decommissioning. This applies both for the Project alone and in combination with other proposed facilities in the vicinity of the Project site.

The updated assessment for landscape and visual effects (Chapter 5 of the Environmental Report) has concluded that the potential significance of effects associated with the proposed changes are no greater than those previously assessed for the approved Project. Whilst in the single GTG scenario this cooling equipment is separate from the GTG (unlike in the three to five GTG scenarios where the cooling equipment is integrated into the GTGs), there would still be considerably less infrastructure in the single GTG scenario than the five GTG scenario (the range of one to five GTGs being already consented in the Development Consent Order). No significant landscape effects are predicted to arise at operation. There would be no material change to the character of the view from the ES viewpoint locations that relate specifically to the Power Generation Plant. The magnitude and significance of impact would be lower than for the realistic worst case (five GTG scenario) reported in the Environmental Statement. No significant visual effects are predicted to arise at operation. Potential cumulative landscape or visual effects in relation to the Power Generation Plant site would be the same as the original ES.

5. EXPLANATION AS TO HOW THE ORDER IS TO BE CHANGED

5.1 The table below sets out the current wording as contained in the Order, alongside a summary as to how PPL considers the Order should be amended to accommodate the necessary changes. A draft of the order setting out these changes is included in the NMC Application.

Change Number	Building or Structure	Summary of what is currently authorised under the Order	Suggested Change
One	Gas Turbine Generator (GTG)	Table 2, Requirement 3, Schedule 2: Each gas turbine generator (where one or two gas turbine generators are constructed) (Part of numbered work 1A): Maximum height: 19 metres above 48.5 metres AOD Maximum length: 30 metres Maximum width: 30 metres	Amend Table 2, Requirement 3, Schedule 2 as set out in Appendix Four so as to permit the following parameters for a single GTG scenario: Maximum height: 19 metres above 48.5 metres AOD Maximum length: 50 metres Maximum width: 40 metres
Two	Flue Stack	Table 2, Requirement 3, Schedule 2: Each exhaust gas emission flue stack (where one or two gas turbine generators are constructed) (part of numbered work 1A): Maximum height: 30 metres above 48.5 metres AOD	Amend Table 2, Requirement 3, Schedule 2 as set out in Appendix Four so as to permit the following parameters for a single GTG scenario: Maximum Width: 11.0 metres up to and including a height of 16.5 metres above 48.5m AOD and 10 metres from a height of

Change Number	Building or Structure	Summary of what is currently authorised under the Order	Suggested Change
		Minimum height: 25 metres above 48.5 metres AOD Maximum width: 8.4 metres	16.5 metres above 48.5m AOD to a height of 30 metres above 48.5m AOD.
Three	Black start diesel generator	1. Schedule 1: Numbered work 1B authorises development comprising….(e) black start diesel generator 2. Table 2, Requirement 3, Schedule 2: Black start diesel generator (part of numbered work 1B): Maximum height: 5.0 metres above 48.5 metres AOD Maximum length: 13.0 metres Maximum width: 5.0 metres	1. Amend Schedule 1, Numbered work 1B(e) as set out in Appendix Three. 2. Amend Table 2, Requirement 3, Schedule 2 as set out in Appendix Four so as to permit the following parameters for all GTG scenarios: Maximum length: 17 metres
Four	Natural gas receiving station and gas treatment compound	Table 2, Requirement 3, Schedule 2:	Amend Table 2, Requirement 3, Schedule 2 as set out in Appendix Four so as to permit

Change Number	Building or Structure	Summary of what is currently authorised under the Order	Suggested Change
		Gas receiving station (part of numbered work 1B): Maximum height: 3 metres above 48.5 metres AOD Maximum length: 50 metres Maximum width: 46 metres	the following parameters for all GTG scenarios: "Natural gas receiving station (part of numbered work 1B): Maximum height: 5 metres above 48.5 metres AOD Maximum length: 50 metres Maximum width 36 metres" "Gas treatment compound (part of numbered work 1B): Maximum height: 5 metres above 48.5 metres AOD Maximum length: 29 metres Maximum width: 16 metres"
Five	Fin fan cooler - lube oil and generator	Schedule 1:	1. Amend Schedule 1, Numbered work 1D as set out in Appendix Three. 2. Amend Table 2, Requirement 3, Schedule 2 as set out in Appendix Four so

Change Number	Building or Structure	Summary of what is currently authorised under the Order	Suggested Change
		Numbered work 1D authorises development comprising...(i) other ancillary development	as to permit the following parameters for a single GTG scenario: Maximum height: 6 metres Maximum length: 13 metres Maximum width: 10 metres

5.2 A draft Progress Power (Gas Fired Power Station) (Amendment) Order has been submitted with this NMC Application incorporating the changes set out above. A track changed version of Schedule 1 of the Order is included at Appendix Three of this Application. A track changed version of Table 2 of Requirement 3 of Schedule 2 of the Order is included at Appendix Four of this Application.

6. PART 2 ENVIRONMENTAL REPORT

6.1 The Environmental Report provides an overview of the potential impacts of the proposed changes and compares these to the original ES submitted to support the application for the Order. The following topics were screened out of requiring updated assessments as the proposed changes did not have the potential to result in any different effects to those identified in the original ES (the reasoning for this screening out is contained in Chapter 4 of the Environmental Report):

- Noise and Vibration;
- Ecology and Nature Conservation;
- Cultural Heritage and Archaeology;
- Water Quality and Resources;
- Geology, Ground Conditions and Agriculture;
- Traffic, Transport and Access;
- Socio-Economics; and
- Health and Waste.

6.2 Accordingly, the only environmental topics that have the potential to result in any different effects to those identified in the original ES are air quality and landscape and visual. The outcome of the updated assessments for air quality and landscape and visual confirmed that the significance of the impact would be reduced or would not result in new of different likely significant environmental effects to those previously reported. It is therefore considered that the proposed changes would constitute non-material changes. Reference is made to the Environmental Report in Appendix Two for a complete explanation and justification for this conclusion.

6.3 COMPLIANCE WITH THE REGULATIONS AND THE GUIDANCE

6.4 The proposed changes will not result in the need to acquire any additional land. The screening assessment has confirmed that no update is required to the Habitat Regulations Assessment as there is no change to the impacts on any sites of European importance.

7. CONCLUSION

7.1 The outcome of the screening and updated assessments confirms that the conclusions in the ES remain valid for the proposed changes. The significance of the impact would be unchanged or reduced. It is therefore considered that the proposed changes are non-material amendments for the purposes of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011. Accordingly, PPL submits that the proposed changes as outlined in section 4 of this Document can be consented by the Secretary as non-material changes.

Appendix 1

Letter Response from the Secretary of State confirming the consultees PPL is to consult with under Regulation 7 of the Changes Regulations

Department for Business, Energy & Industrial Strategy

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Chris McKerrow
Project Manager
Watt Power
(By e-mail)

25 July 2016

Dear Mr McKerrow

PROGRESS POWER (GAS FIRED POWER STATION) ORDER 2015 – PROPOSED NON-MATERIAL CHANGE APPLICATION

Thank you for your e-mail of 11 July 2016 with two attachments on behalf of Progress Power Limited ("the Applicant"). It is noted that the attached documents consist of: i) a Microsoft Excel spreadsheet of the proposed consultees (highlighted in green) in respect of changes to the development consent order for the Progress Power Generating Station; and ii) separate advice on this matter from the Planning Inspectorate of 7 July 2016.

The Applicant has requested that the Secretary of State give written consent under regulation 7(3) of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (as amended) ("the 2011 Regulations"), such that the Applicant does not need to consult those persons specified and highlighted in red in the spreadsheet, as it is not considered that they will be directly affected by them.

The Secretary of State has considered the request and agrees that, with the exception of Highways England (referred to incorrectly as the 'Highways Agency' in the spreadsheet), Breckland Council, Suffolk Coastal District Council, Waveney District Council and Cambridgeshire County Council (who it is noted are listed in the spreadsheet as a "*relevant local authority"* within the meaning given by section 102(5) of the Planning Act 2008), the Applicant does not need to consult directly with those persons specified and highlighted in red in spreadsheet, as they will not be directly affected by the changes being proposed. Accordingly, this letter is written consent under regulation 7(3) of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 such that consultation under regulation 7 of those persons specified is not required.

In taking this decision, the Secretary of State notes there will be public consultation on the proposals following submission of the application for non-material changes to the Order in line with the requirements in regulation 20 of the 2011 Regulations.

Finally, the Secretary of State`s consent in this matter should not be taken as indicating approval for any other aspects of the proposed changes to the Progress Power Generating Station which fall to the Secretary of State for consideration and determination.

Yours sincerely,

Laura Allen

Laura Allen
Case Manager, Energy Infrastructure Planning

Appendix 2

Environmental Report

THE PROGRESS POWER (GAS FIRED POWER STATION) ORDER 2015

NON-MATERIAL CHANGE TO DEVELOPMENT CONSENT ORDER

FOR PLANNING

AUGUST 2016

WSP | PARSONS BRINCKERHOFF

THE PROGRESS POWER (GAS FIRED POWER STATION) ORDER 2015

NON-MATERIAL CHANGE TO DEVELOPMENT CONSENT ORDER

Progress Power Limited

Project no: 70023845
Date: August 2016

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1.1.2 Following the grant of the Development Consent Order, Progress Power Limited has identified the following non-material, minor changes to the parameters of the Power Generation Plant element of the Progress Generating Station:

- Increase in size of the Gas Turbine Generator (relates to single Gas Turbine Generator scenario only).
- Increase in width of flue stack (relates to single Gas Turbine Generator scenario only).
- Increase the permitted number of black start diesel generators from one to three (relates to single Gas Turbine Generator scenario only);
- Amend the permitted natural gas receiving station and gas treatment compound so as to permit the construction of two separate smaller compounds (relates to all Gas Turbine Generator scenarios);
- Include an express reference to an external fin fan cooler (relates to single Gas Turbine Generator scenario only); and
- Dimensions of black start diesel generator (relates to all Gas Turbine Generator scenarios).

1.1.3 This report is submitted in support of a non-material change application under the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 ('the Regulations'). The report provides an overview of the potential impacts of the proposed changes and compares these to the original Environmental Statement (ES) submitted to support the application for the Development Consent Order.

1.1.4 The following topics were screened out of requiring updated assessments as the proposed changes did not have the potential to result in any different effects to those identified in the original ES (the reason for this Screening out is explained later on in this Report):

- Noise and Vibration;

- Ecology and Nature Conservation;
- Cultural Heritage and Archaeology;
- Water Quality and Resources;
- Geology, Ground Conditions and Agriculture;
- Traffic, Transport and Access;
- Socio-Economics; and
- Health and Waste.

1.1.5 Accordingly, the only environmental topics that have the potential to result in any different effects to those identified in the original ES are air quality and landscape. The outcome of the updated assessments for air quality and landscape confirmed that the significance of the impact would be reduced or would not result in any new or different likely significant environmental effects to those previously reported. It is therefore considered that the proposed changes would constitute a non-material change.

2 INTRODUCTION

2.1.1 Progress Power Limited (PPL) submitted an application for Development Consent for the Progress Generating Station in March 2014. The Progress Power (Gas Fired Power Station) Order 2015 (the Development Consent Order) was made by the Secretary of State on 23 July 2015. The Development Consent Order granted consent for a gas-fired peaking plant with up to five gas turbine generators (GTGs) on land at the former Eye Airfield located at Eye, Mid Suffolk. The Power Generating Station would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical output of up to 299 Megawatts (MW). The plant would be fuelled by natural gas, supplied to the site by a new gas pipeline connecting the Power Generation Plant element of the Power Generating Station to the existing National Gas Transmission System (NTS).

2.1.2 Following the granting of the Development Consent Order, PPL has identified some non-material, minor changes to the parameters of elements of the Power Generation Plant (as described in Chapter 3).

2.1.3 This report is submitted in support of a non-material change application under the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 ('the Regulations'). The report provides an overview of the potential impacts of the proposed changes and compares these to the original Environmental Statement (ES) submitted in support of the application for the Development Consent Order (Parsons Brinckerhoff, March 2014) which reported the findings of the Environmental Impact Assessment (EIA).

2.1.4 The original EIA considered a 'realistic worst case scenario' which was identified on

a topic by topic basis. All of the environmental topics assumed that five GTGs was the realistic worst case scenario.

2.1.5 This report demonstrates that the potential impacts associated with the proposed changes would either be reduced or would not result in any new or different likely significant environmental effects to those previously reported. The proposed changes can therefore be described as non-material for the purpose of Part 1 of the Regulations.

2.1.6 The Report is supported by the results of an environmental screening exercise (Chapter 4) and updated assessments for landscape and visual impacts (Chapter 5) and air quality (Chapter 6).

3 PROPOSED NON-MATERIAL CHANGES

3.1 INTRODUCTION

3.1.1 The proposed changes are shown on the following Figures:

- Figure 1 – Site Plan;
- Figure 2 – Gas Turbine Generator Plan;
- Figure 4 – Black Start Generator Plan and Elevations;
- Figure 5 – Gas Turbine Generator Overlay Plan; and
- Figure 6 – Overlay Gas Turbine Generator, Black Start Generator and Fin Fan Cooler Elevations.

3.2 PARAMETERS OF GAS TURBINE GENERATOR

3.2.1 A structure known as a ‘diffuser’ forms part of the GTG. The exhaust gas system guides the exhaust gas from the GTG through the diffuser to the flue stack. It also acts as a noise insulator from noise emitted by the GTG. For the single GTG scenario, the length of the GTG needs to be amended in order to accommodate the additional length created by the addition of the diffuser element of the GTG.

3.2.2 In addition, a lube oil system is also attached to the GTG. This increases the width of the GTG by an additional 10 metres (from 30 metres to 40 metres). This lubrication system, complete with tank, pumps, coolers, filters, valves and various control and protection devices, furnishes normal lubrication and absorption of heat rejection load of the gas turbine. Lubricating fluid is circulated to the three main turbine bearings, generator bearings, and to the turbine accessory gear and fuel pump. Also, lubricating fluid is supplied to the starting torque converter for use as hydraulic fluid as well as for lubrication. Additionally, a portion of the pressurized fluid is diverted and filtered again for use by hydraulic control devices as control fluid.

3.2.3 For the single GTG scenario only, there is a need to increase the maximum length of

the GTG from 30 metres to 50 metres to accommodate the diffuser system elements of the GTG and the width from a maximum of 30 metres to 40 metres to accommodate the lube oil system.

3.3 PARAMETERS OF FLUE STACK

3.3.1 The flue stack consists of a lower and an upper stack section. The lower section, being that part of the flue stack up to a height of 16.5 metres, is thicker (and therefore wider) than the upper section of the flue stack. This is because the lower stack section consists of greater layers of casing, which is self-supporting, and insulation. The upper section includes the silencer and an outer stack pipe (round or square) with internal insulation. In the silencer, 'splitters' are installed to reduce the noise of the GTG.

3.3.2 The parameters set out in Requirement 3 of the Development Consent Order, did not account for this difference. Accordingly, for the single GTG scenario, there is a need to increase the width of the flue stack from 8.4 metres to 11 metres up to a height of 16.5 metres and 8.4 metres to 10 metres from 16.5 metres to 30 metres. The increase in the stack width for the upper section is required to enable the GTG to meet the noise limits under the Development Consent Order through the inclusion of a silencer.

3.4 BLACK START DIESEL GENERATOR

3.4.1 As one GTG is larger in capacity than the individual capacity of, say, five smaller GTGs, more than one black start diesel generator would be required to start up a generating station with a single GTG. Where two or more GTGs are constructed, as the GTG would be smaller in capacity, a single black start diesel generator can be used to start each GTG individually. In total, three black start diesel generators would be needed in the single GTG scenario. This requires a change to Schedule 1 of the Development Consent Order (numbered work 1B).

3.4.2 The black start generator is used to start the GTGs in the event of a failure / blackout on the National Grid Electricity System.

3.4.3 The size of the black start diesel generator is also slightly longer than originally predicted; the length of each generator is 4 metres longer, meaning that the parameters need to increase from 13 metres to 17 metres. This applies to all GTG scenarios. This requires a change to Table 2 in Requirement 3 of Schedule 2.

3.4.4 In summary:

- → in the single GTG scenario only, the number of black start diesel generators needs to increase from one to three; and
- → in all GTG scenarios, the size of the black start diesel generators needs to increase in length from 13 metres to 17 metres.

3.5 NATURAL GAS RECEIVING STATION AND GAS TREATMENT COMPOUND

3.5.1 Whilst the final gas filter (which forms part of the of natural gas receiving station) can be constructed as part of the prescribed parameters, there is a requirement for there to be a separation distance between the various filter mechanisms to allow a flow of natural gas.

3.5.2 Two smaller compounds, rather than one larger compound, are therefore needed in order to accommodate the separation of the natural gas receiving station and the gas treatment compound.

3.5.3 The total area for the compound currently consented by the Order is 50 metres x 46 metres; a total of 2300 square metres.

3.5.4 The dimensions for two smaller compounds add up to 2,264 square metres in total, with the following dimensions:

- Compound 1 - Natural Gas Receiving Station (5 metres (height), 36 metres (width) and 50 metres (length));
- Compound 2 - Gas Treatment Compound (5 metres (height), 16 metres (width) and 29 metres (length)).

3.5.5 This change, therefore, involves a reduction in the total built footprint.

3.6 FIN FAN COOLER

3.6.1 The realistic worst case scenario of five GTGs and five stacks at 30m assessed in the ES accounted for GTG cooling with a built in cooling system within each GTG. This design is common for smaller GTGs. Throughout the original ES, the assessment of the GTG considered the built-in cooling system.

3.6.2 For a single GTG, the cooling system is not contained within the GTG but is in a standalone structure (Fin Fan Cooler) to allow for a closed water cooling system and to transfer the heat produced by the generator coolers and the gas turbine/generator lube oil system via the fin fan cooler to the ambient air.

3.6.3 The Fin Fan Cooler required for the single GTG scenario would be 13m long, 10m wide and 6m high.

3.6.4 Even with a stand alone Fin Fan Cooler, the total built footprint of the single GTG scenario is smaller than the larger consented five GTG scenario (see – Figures 5 and 6).

3.7 SUMMARY

3.7.1 Table 3.1 provides a summary of the proposed changes to the dimensions.

Table 3-1 Impact Assessment Screening

BUILDING OR STRUCTURE	SUMMARY OF WHAT IS CURRENTLY CONSENTED	CHANGE
Gas Turbine Generator (GTG)	Each GTG (where one or two GTGs are constructed) (Part of numbered work 1A): Maximum height: 19 metres (metres above 48.5 AOD) Maximum length: 30 metres Maximum width: 30 metres	For a single GTG only: Maximum height: unchanged Maximum length: increase from 30 to 50 metres. Maximum width: increase from 30 to 40 metres
Flue Stack	Each exhaust gas emission flue stack (Part of numbered work 1A): Maximum Height: 30 metres (metres above 48.5 AOD) Minimum Height: 25 metres (metres above 48.5 AOD) Maximum width: 10 metres	For single GTG only: Maximum & minimum heights: unchanged. Maximum width: increase from 8.4 to 11 metres up to a maximum height of 16.5 metres (metres above 48.5 AOD) and increase from 8.4 to 10 metres from 16.5 metres to 30 metres (metres above 48.5 AOD)
Black start diesel generator	Black start diesel generator (Part of numbered work 1B): Maximum Height: 5 metres (metres above 48.5 AOD) Maximum length: 13 metres Maximum width: 5 metres	In the single GTG scenario only, increase from a single black start diesel generator to three black start diesel generators For all GTG Scenarios: Maximum height: unchanged Maximum length: increase from 13 to 17 metres Maximum width: unchanged
Natural gas receiving station and gas treatment compound	Natural gas receiving station and gas treatment compound (Part of numbered work 1B):	For all GTG scenarios: Split into two areas. Natural gas receiving station: Maximum height: 5 metres

BUILDING OR STRUCTURE	SUMMARY OF WHAT IS CURRENTLY CONSENTED	CHANGE
	Maximum height: 3 metres (metres above 48.5 AOD) Maximum length: 50 metres Maximum width: 46 metres	(metres above 48.5 AOD) Maximum length: 50 metres Maximum width: 36 metres Gas treatment compound: Maximum height: 5 metres (metres above 48.5 AOD) Maximum length: 29 metres Maximum width: 16 metres
External Fin fan cooler	Built in coolers to the GTG	For a single GTG only: “Ancillary equipment" to specifically include reference to external fin fan cooler containing the following measurements: Maximum height: 6 metres (metres above 48.5 AOD) Maximum length: 13 metres Maximum width: 10 metres

4 SCREENING

4.1 METHODOLOGY

4.1.1 All topics assessed in relation to the application for the Development Consent Order were considered in terms of the proposed non-material changes (Chapter 3). The following steps were undertaken:

- All topics and potential impacts assessed in the ES submitted in support of the application for the Development Consent Order were screened against the parameters of the proposed changes referred to in Chapter 3 above. This included consideration of the environmental effects of the proposed changes to the project and where these effects could result in a different significance of effect to that identified in the original ES.

- Where there was a clear case that the significance of the effect would be unchanged or reduced, these topics were 'pre-screened' out of further assessment. The outcome of the pre-screening exercise is presented in Table 4.1 of this Chapter 4. In the case of landscape and visual impact, the pre-screening exercise was informed by photomontages and an account is provided in Chapter 5, which concluded that the five GTG scenario remained the realistic worst case and therefore the assessment in the original ES remains valid.
- Where further analysis was required to determine whether the significance of the effect would be unchanged or reduced, updated assessments have been provided in Chapter 5 and Chapter 6 of this Report.
- A search of the National Infrastructure Planning register of applications and a search of Mid Suffolk District Council and Suffolk County Council's planning applications register has been undertaken. No new applications have been registered for Nationally Significant Infrastructure Projects or major planning applications that would be required to be considered in the assessment of cumulative effects. There are no changes to the baseline information for all topics which require an update to the cumulative assessment.

4.1.2 The majority of the proposed changes referred to in Chapter 3 relate only to the single GTG scenario:

- Changes in dimensions for the single GTG;
- Width of flue stack;
- Increase in number of Black Start Diesel Generators from one to three;
- A stand alone Fin Fan Cooler.

4.1.3 These proposed changes in the single GTG scenario have been screened and the updated assessments undertaken in the context of whether the effects of the single GTG scenario would be different to those identified in the realistic worst case scenario identified in the ES for all environmental topics, being the five GTG scenario.

4.1.4 The following proposed changes referred to in Chapter 3 relate to all GTG scenarios:

- Dimensions of Black Start Diesel Generator; and
- Creating two compounds out of the single compound for the Natural Gas Receiving Station and Gas Treatment Compound

4.1.5 These proposed changes have been considered in the context of the five GTG scenario and whether or not they would create different environmental effects to those identified in the ES.

4.2 SCREENING

IDENTIFICATION OF CHANGES AND EFFECTS RELEVANT TO ASSESSMENT

4.2.1 Table 4.1 sets out the results of screening assessment in respect of the proposed changes:

Table 4-1 Impact Assessment Screening

EIA TOPIC	CHANGE IN RELEVANT PROJECT PARAMETERS	KEY CHANGE IN EFFECTS	CHANGE IN IMPACT SIGNIFICANCE	UPDATED ASSESSMENT
Air Quality	**Single GTG scenario:** 1. Increase in dimensions of GTG; 2. Increase in width of part of flue stack; 3. Increase in number of Black Start Diesel Generators; 4. Stand alone fin fan cooler **All GTG scenarios:** N/A **Not relevant:** 1. Change in width of Black Start Diesel Generators has no effect on level of emissions; 2. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound has no effect on emissions.	Potential	Assessment has concluded no adverse impact on significance (see Section 6)	Y
Noise and Vibration	**Single GTG scenario:** 1. Increase in dimensions of GTG; 2. Increase in width of part of flue stack; 3. Increase in number of Black Start Diesel Generators; 4. Stand alone fin fan cooler **All GTG scenarios:** N/A	No change in level of noise and vibration (Requirement 17 of the Development Consent Order limits operational noise and this remains unchanged)	None	N

EIA TOPIC	CHANGE IN RELEVANT PROJECT PARAMETERS	KEY CHANGE IN EFFECTS	CHANGE IN IMPACT SIGNIFICANCE	UPDATED ASSESSMENT
	Not relevant: 1. Change in width of Black Start Diesel Generators has no effect on noise levels; 2. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound has no effect on noise levels.			
Ecology and Nature Conservation	**Single GTG scenario:** 1. Increase in dimensions of GTG; 2. Increase in width of part of flue stack; 3. Increase in number of Black Start Diesel Generators; 4. Stand alone fin fan cooler **All GTG scenarios:** N/A **Not relevant:** 1. Change in width of Black Start Diesel Generators does not affect air quality; 2. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound does not affect air quality	Potential effects related to air quality but assessment confirmed no significant change (see Chapter 6)	None	N
Water Quality and Resources	None of the proposed changes are relevant as they do not have any direct or indirect effects on water quality or resources.	No change in effects as water resources not affected	None	N

EIA TOPIC	CHANGE IN RELEVANT PROJECT PARAMETERS	KEY CHANGE IN EFFECTS	CHANGE IN IMPACT SIGNIFICANCE	UPDATED ASSESSMENT
Geology, Ground Conditions and Agriculture	**Single GTG scenario:** N/A **All GTG scenarios:** 1. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound **Not relevant:** 1. Increase in width of part of flue stack ; 2. Increase in dimensions of GTG; 3. Increase in number of Black Start Diesel Generators; 4. Stand alone fin fan cooler ; 5. Change in width of Black Start Diesel Generators. In respect of 1 to 5 above, whilst their respective dimensions increase, the built footprint reduces overall due to the smaller footprint of the Natural Gas Receiving Station and the Gas Treatment Compound.	Reduction in building footprint, therefore impacts are reduced	None	N
Landscape and Visual Assessment	**Single GTG scenario:** 1. Increase in dimensions of GTG; 2. Increase in width of part of flue stack; 3. Increase in number of Black Start Diesel Generators;	Potential	Screening assessment has concluded none (see Chapter 5)	Y

EIA TOPIC	CHANGE IN RELEVANT PROJECT PARAMETERS	KEY CHANGE IN EFFECTS	CHANGE IN IMPACT SIGNIFICANCE	UPDATED ASSESSMENT
	4. Stand alone fin fan cooler **All GTG scenarios:** 1. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound 2. Change in length of Black Start Diesel Generators			
Traffic, Transport and Access	None of the proposed changes are relevant as they will not result in any changes to traffic movements.	No change	None	N
Cultural Heritage and Archaeology	**Single GTG scenario:** 1. Increase in dimensions of GTG; 2. Increase in width of part of flue stack; 3. Increase in number of Black Start Diesel Generators; 4. Stand alone fin fan cooler **All GTG scenarios:** 1. Creation of two compounds for Natural Gas Receiving Station and Gas Treatment Compound **Not relevant:** 1. Change in length of Black Start Diesel Generators will not affect any heritage assets.	No change in effects on heritage assets	None	N
Socio-Economics	None of the proposed changes are relevant as	No change	None	N

EIA TOPIC	CHANGE IN RELEVANT PROJECT PARAMETERS	KEY CHANGE IN EFFECTS	CHANGE IN IMPACT SIGNIFICANCE	UPDATED ASSESSMENT
	they will not result in any changes in employment or effects on local receptors.			
Health and Waste	None of the proposed changes are relevant as they will not result in any changes to impacts on human health or any increase in the production of waste.	No change	None	N

4.2.2 The follow sections provide further commentary on the topics in Table 4.1.

NOISE

4.2.3 As part of the original EIA, the Power Generation Plant was modelled based on a site layout utilising five air cooled, 59MW single cycle gas turbines and associated plant. Each turbine was modelled with a 30m high exhaust stack with a sound power level of 110 dB (Lw A) at the stack termination when running at base load. The predicted noise levels based on this configuration formed the noise limits for the Power Generation Plant as set out in the Requirements contained in the Development Consent Order.

4.2.4 An alternative site layout and configuration is being considered, using a single, but higher power rated turbine, which would be enclosed within a single engine house with a single exhaust stack. A manufacturer of this type of unit has confirmed that the alternative configuration will be able to meet the noise limits contained in the Development Consent Order, as noise from the GTG units is attenuated by the turbine casing, and so varies little with higher power output turbines. The main variable noise producing element is likely to be exhaust noise through the top of the stack. If a single exhaust stack is used, then the sound power level at the stack termination should not exceed 113 dB (Lw A) when running at base load.

4.2.5 Regardless of the plant configuration, the following embedded mitigation will be applied to minimise noise:

- The GTG and compressor are to be housed in an individual acoustic enclosure specified at 85 dB(A) Sound Pressure Level at 1 m.
- Turbine filter and ventilation apertures are to be fitted with high performance silencers, and designed such that all sensitive receptors benefit from screening and/or directivity corrections.
- High performance silencers will be installed in the outlet duct(s) between the GTGs. Due to the impracticality of screening stack noise, discharge noise will be controlled using silencers tuned to attenuate low frequencies from the GTG exhausts.
- Unit transformers and generator transformers to be housed in an appropriate enclosure or three sided pen, to provide full screening to noise sensitive receptors.
- All plant items will be controlled to minimise noise of an impulsive or tonal nature, such that the rating level as defined in BS 4142:2014 is equal to the specific noise level.

4.2.6 It is confirmed that in the proposed changes in the single GTG scenario and the proposed changes in all GTG scenarios (as outlined in paragraphs 4.1.2 and 4.1.4 above) are not likely to result in any changes to the predicted noise effects as assessed in the ES. In any event, the proposed changes can all be accommodated within the noise restrictions set out in Requirement 17 of the Development Consent

Order.

4.2.7 Therefore, there are no new or different adverse noise effects from those set out in the ES.

CULTURAL HERITAGE

4.2.8 There are no designated assets directly affected by the proposed changes to the Power Generation Plant site.

4.2.9 In terms of indirect impacts on the setting of designated assets, the proposed changes have been considered against each of the reported impacts and it is concluded that, given the scale and nature of the changes, that there is no change to the predicted impacts on the setting of designated or non-designated heritage assets reported in the ES.

4.2.10 Following concerns raised during the Examination of the Development Consent Order by the local planning authority and English Heritage (now Historic England), particular consideration has been given to the proposed changes to the Power Generation Plant and the likely effect on the setting of Eye Castle (the remains of the motte and bailey castle, a Scheduled Ancient Monument and Grade I listed building) and Eye Conservation Area.

4.2.11 The ES reported a slight adverse impact on the significance of Eye Castle resulting from the impact on views from the Castle towards the Power Generation Plant and a slight adverse impact on the significance of Eye Conservation Area. The Examining Authority agreed with this assessment, concluding at paragraph 4.174(a) of the Examining Authority's Report, that within the town of Eye the Power Generation Plant would only be visible from Eye Castle, and that as views towards Eye from the higher ground to the south would be affected with the development visible as an addition to the existing industrialised background, the Power Generation Plant would have a relatively small impact on the wider setting of Eye Conservation Area and therefore on significance. In relation to the setting of Eye Castle itself, the Examining Authority also concurred with the findings of the ES, concluding that, whilst the stacks would be a prominent feature, the Castle takes its significance as much from its position in the town as from its view into the surrounding area, and that the Power Generation Plant would have a relatively small impact on the wider setting of the Eye Castle and therefore on significance. The Secretary of State agreed with the Examining Authority's conclusions.

4.2.12 The effects of the proposed changes on the impact on the setting of Eye Castle and Eye Conservation Area have been reviewed. It is concluded that there would be no different likely significant environmental effects to those previously reported.

4.2.13 The ES reported that construction of the Power Generation Plant has the potential to impact on buried archaeology and would impact directly on the non-designated assets HA31 and HA32, the medieval field boundaries on the Airfield and the Airfield itself. There would be a substantial and permanent adverse effect on these assets

but they were considered to be of low local significance. Overall the ES concluded that there would be a moderate or slight adverse effect from construction of the plant which was not considered significant, and that there would be no further impact on these assets during operation or decommissioning. The proposed changes do not alter this conclusion.

ECOLOGY

4.2.14 The proposed changes are to the layout of the Power Generation Plant Site (plant buildings/ancillary structures), rather than the Order Limits. Of relevance to this assessment is the widening of the stack in the single GTG scenario, the addition of the stand alone fin fan cooler in the single GTG scenario and the increase in number of black start generators in the single GTG scenario.

4.2.15 The splitting of the natural gas receiving station and gas treatment compound will not result in any changes to the predicted effects on ecological receptors as it will not affect emissions and is therefore not relevant to the assessment.

4.2.16 As part of the original assessment for ecology, predicted impacts and effects (without mitigation) of project activities to ecological receptors included within the Order Limits:

- Permanent and temporary habitat loss;
- Habitat fragmentation;
- Habitat degradation;
- Direct mortality during site clearance and construction;
- Direct and indirect disturbance from construction activities including visual, noise, vibration and lighting;
- Pollution caused by increased levels of dust, use of hazardous materials and incidental release of chemicals, fuels or waste materials.
- Direct mortality during operational use;
- Direct disturbance from operational use visual, noise and lighting;
- Pollution of water body caused by run off; and
- Pollution caused by air deposition.

4.2.17 The four European statutory designated sites identified in the original ES (Redgrave and Lopham Fens Ramsar, Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) and Waveney & Littlehouse Valley Fens Special Area of Conservation (SAC)) occupy the same area of fen habitat over 7 km from the Project Site. It is considered that these are located at a sufficient distance from the Project Site such that indirect construction impacts such as dust, noise, vibration and temporary lighting will dissipate a short distance from the Project Site and that the impact on these statutorily designated sites will remain negligible and not significant.

4.2.18 The remaining three statutory designated sites identified in the original ES (Major Farm, Braiseworth SSSI; Gypsy Camp Meadows, Thrandeston SSSI; and The Pennings, Eye Local Nature Reserve (LNR)) are designated for wet and dry meadow habitat. These habitats are not sensitive to indirect effects such as noise, vibration and lighting. The closest of these sites is located 1.7 km from the Project Site. Construction dust will dissipate a short distance from the Project Site, and the impact on these sites will remain negligible and not significant.

4.2.19 The three non-statutory designated sites identified in the original ES (Braiseworth Wood / Stegall's Wood County Wildlife Site (CWS), Mellis Common CWS and Thrandeston Marsh CWS) are designated for woodland, common land and marsh habitats respectively. These habitats are not sensitive to indirect effects such as noise, vibration and lighting and no impacts

4.2.20 No changes to areas of permanent and/or temporary habitat loss will occur as a result of proposed changes outlined in paragraphs 4.1.2 and 4.1.4 above. The original assessment assumed temporary land-take of all areas within the Order Limits. As the Order Limits remains the same, no change to habitat fragmentation or incidental mortality of species is likely to occur. The proposed changes will not result in an increase in dust, noise, vibration or lighting adverse effects. Therefore there would be no change to the environmental effects and impacts reported in the ES and the conclusions remain the same.

OTHER TOPICS

4.2.21 As set out in Table 4.1, none of the proposed changes are relevant the conclusions of the original EIA topics relating to traffic and transport, water quality, socio-economics, and health and waste.

4.2.22 Potential effects on geology, ground conditions and agriculture were considered in relation to the splitting of the natural gas receiving station and gas treatment compound. However, the effects would be unchanged as the Order Limits would not change and therefore it was concluded that an updated assessment would not be required.

5 LANDSCAPE ASSESSMENT

5.1 INTRODUCTION

5.1.1 This Chapter considers whether potential landscape and visual impacts arising from the proposed changes to the Power Generation Plant site would give rise to new or different environmental effects than those assessed in the ES.

5.1.2 The proposed changes to the Power Generation Plant site have been considered in relation to the landscape and visual assessment chapter of the ES submitted to support the application for the Development Consent Order. In terms of visibility, the

most noticeable of the proposed changes compared to the parameters set out in the Development Consent Order would be changes to the dimensions of both the GTG and the flue stack (in the single GTG Scenario only). These are the tallest structures and it is important to note that there would be **no** change to their overall height.

5.1.3 Changes are proposed to other structures including:

- in the single GTG scenario - increase in number of black start diesel generators from one to three; and a stand-alone fin fan cooler (new structure); and
- in all GTG scenarios - increase in dimensions of the black start diesel generator; the creation of two (out of the current single) natural gas receiving station and gas treatment compound.

5.1.4 All of the changes referred to in 5.1.3 would affect structures that are of a lower height than the GTG and flue stack and, in terms of visibility, would be less noticeable. In the single GTG scenario the tallest of these structures would be the proposed fin fan cooler, which would be a new stand-alone structure and would be located adjacent to the gas turbine building. In the five GTG scenario ancillary cooling systems would be built in and not visible. No changes are proposed to the landscape mitigation for the Power Generation Plant or for the design and mitigation of the Gas Connection and Above Ground Installation site which will be located near the Power Generation Plant.

5.1.5 This updated assessment has focussed on potential changes to views and visual amenity. Potential landscape effects have not been considered further for the following reasons:

- There would be no change to the location or extent of the Power Generation Plant. It would be built on land designated for industrial development within Eye Airfield which could accommodate the proposed development. Potential impacts on landscape character and landscape elements (trees, woodland/plantations etc.) would be minor, the same as assessed in the ES;
- The proposed development would be in keeping with the character and scale of surrounding industrial and commercial development within Eye Airfield; and
- No significant adverse effects were reported on key landscape character receptors within the locality.

5.1.6 Potential effects would arise in relation to views and visual amenity at a limited number of locations. This assessment has used selected viewpoints from the ES that are representative of people living near the Power Generation Plant site who are highly sensitive to change and have prolonged opportunities to view the landscape from their dwellings.

5.1.7 The ES identified potential effects on visual amenity would arise primarily in relation to the five 30m high flue stacks and 19m high GTGs. Other lower structures within the Power Generation Plant would be substantially screened by the surrounding industrial buildings within Eye Airfield and adjacent woodland within the National Grid

Gas Compressor Station.

5.1.8 Assuming the proposed changes to the lower structures would be screened by these elements, the updated assessment has focussed on potential changes to views in relation to the tallest structures, the single flue stack and the GTG, as well as the fin fan cooler, which would be a new structure. The proposed changes that relate to all GTG scenarios are not considered to affect landscape and visual effects given they are low level structures (5 metres). This assessment, therefore, focused on the proposed changes relevant to the single GTG scenario, focussing on the flue stack, GTG and fin fan cooler for the reasons expressed above. The revised assessment does not affect the conclusions reported in the ES; no new significant visual effects are predicted to arise from the proposed changes.

5.2 METHODOLOGY

5.2.1 The methodology for the assessment of potential visual effects from the proposed changes has followed the same process and applied the same criteria as the ES. Similarly, for the purpose of this assessment, impacts that are assessed as being either moderately adverse or above are considered significant.

5.2.2 All viewpoints described in ES Chapter 11 that relate specifically to the Power Generation Plant have been reviewed and it has been concluded that there are no new, or materially different, likely significant effects in respect of any of these viewpoints.

5.2.3 The updated assessment has focussed on locations where the proposed changes would be most visible to highly sensitive receptors. The following three viewpoint locations were identified because they are representative of people who live near the Power Generation Plant site, who are highly sensitive to change and have prolonged opportunities to view the landscape from their dwellings:

- Viewpoint VP2: Victoria Hill, Eye;
- Viewpoint VP3: PRoW off Gaye Crescent, Eye; and
- Viewpoint VP11: Hall Farm, Yaxley.

5.2.4 The new photomontages for these viewpoints (see Appendix A) include the same photographs of existing views that were included in the ES which were taken between June 2013 and January 2014, a photomontage of the approved project at year one when landscape mitigation planting would have little visual impact (a single GTG scenario and the five GTG scenario are shown), and a photomontage showing the proposed changes in respect of the single GTG scenario, also at year one. Please refer to ES Figure 11.5, Viewpoint Locations (Document reference 6.3.0, Volume C), and Photographs and Photomontages (Document reference 7.1) Figure Nos. 11.9, 11.10 and 11.18 for the original photomontages for Viewpoints VP2, VP3 and VP11 respectively. The proposed changes are only shown in respect of the single GTG scenario as it is only in that scenario that the changes referred to in paragraphs 4.1.2 and 4.1.4 have the potential for any new or different environmental

effects.

5.2.5 The same methodology has been used for the production of the original and new photomontages.

5.3 SUMMARY OF ORIGINAL ASSESSMENT

5.3.1 The ES concluded the Power Generation Plant would be sited within the former Eye Airfield where it would be visible in the context of similar industrial buildings, tall wind turbines (135m high) and mature woodland belts/hedgerows. The maximum height of the Power Generation Plant flue stacks would be 30m, appreciably lower than the adjacent 40m high stack within the existing Eye Power Station and ~50m high mast at the National Grid Gas Compressor Station. Views of Eye Airfield from all directions are influenced to a varying extent by four existing 135m high wind turbines. Although the upper part of the stacks would be visible on the skyline above the mature mitigation planting and adjacent woodland, the residual visual impact would be not significant for nearby receptors with high sensitivity to change.

5.3.2 The ES noted views of the Power Generation Plant stacks would be available from distances greater than 1km except for close views from public rights of way (PRoW) at Eye Airfield. The lower structures would be substantially screened by mature woodland adjacent to the eastern boundary of the site and extensive areas of woodland/hedgerow mitigation planting on the southern and western boundaries.

CONSTRUCTION

5.3.3 The ES assessment concluded significant short term adverse visual effects on sensitive receptors would arise during construction and commissioning of the Power Generation Plant. Construction activities would last for approximately 21 months and would have a direct effect on all areas required for the permanent works, as well as a temporary construction area adjoining the southern boundary of the Power Generation Plant.

OPERATION

5.3.4 ES Chapter 4 describes why a power generation plant comprising five GTGs each with a 30m high flue stack compared to one or two GTGs would be the realistic worst case scenario in terms of its visibility in the wider landscape. Although there are several tall stacks at Eye Airfield they are generally single stacks associated with different developments throughout the industrial estate. In comparison the linear arrangement of five closely spaced stacks would be an unusual feature that would draw the eye. The flue stacks would be the most prominent elements within the Power Generation Plant site and would be visible on the skyline over a wide area.

5.3.5 They would cause a change to the skyline and the top of the stacks would always be visible above nearby mature woodland. Although they would be seen in the context of the taller structures described above, they would be set against a backdrop of mature woodland and, with time, most of the Power Generation Plant structures would be substantially screened by the mitigation woodland and hedgerow planting.

5.3.6 Table 5.1 summarises the significance of visual effects in relation to viewpoints VP2, VP3 and VP11 during construction and at operation when the landscape mitigation had achieved its design objectives.

TABLE 5.1 SIGNIFICANCE OF VISUAL EFFECTS

VIEWPOINT / ES FIG. NO.	LOCATION / DISTANCE	RECEPTOR / SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF EFFECT
VP2 Figure 11.9	B1077, Victoria Hill, Eye 1.3km, east of site	Residential and Recreational / High	Construction: Minor	Moderate Adverse Significant (temporary)
			Operation: Negligible	Slight Adverse Not Significant
VP3 Figure 11.10	Allotments and PRoW, Gaye Crescent, Eye 1.1km, south east of site	Residential and Recreational / High	Construction: Minor	Moderate Adverse Significant (temporary)
			Operation: Negligible	Slight Adverse Not Significant
VP11 Figure 11.18	Hall Farm, PRoW, Yaxley 1.6km, south of site	Residential / High	Construction: Moderate	Moderate Adverse Significant (temporary)
			Operation: Negligible	Slight Adverse Not Significant

DECOMMISSIONING

5.3.7 The Power Generation Plant will be designed for an operating life of 25 years from commencement of operation. During decommissioning, temporary activities and potential visual impacts would be similar to those during construction. Landscape mitigation screen planting and hedgerow planting would be retained and would screen some views of the decommissioning activities.

5.4 UPDATED ASSESSMENT

5.4.1 The proposed changes to the approved layout of the Power Generation Plant site and approved parameters set out in the Development Consent Order are described in detail in Chapter 3 above and are shown in Figures 1, 2, 4, 5 and 6 accompanying this report. In terms of visibility, the most noticeable differences are:

- → The alternative layout of the Power Generation Plant would be based around one GTG and one flue stack instead of up to five GTGs and flue stacks. Consequently, the footprint of the Power Generation Plant would be smaller. Although the structures would not extend as far south in the site as originally proposed, the perimeter fence and mitigation planting would be in the same position as the approved project;

- The single GTG would be increased in length to 50 metres (previously 30 metres) and width to 40 metres (previously 30 metres); and
- The maximum width of the stack would be increased from 8.4 metres to 11 metres at up to a height of 16.5 metres and from 8.4 metres to 10 metres from 16.5 metres up to a maximum height of 30 metres.

5.4.2 Proposed changes to other lower structures within the Power Generation Plant site would be less noticeable and would include:

- In the single GTG scenario, three black start diesel generators would be required to start up the single GTG. Whilst this is an increase from one, this change is only where there is a single GTG. Accordingly, there would still be considerably less infrastructure in the single GTG scenario than the five GTG scenario (the range of one to five GTGs being already consented in the Development Consent Order).
- In the single GTG scenario, the fin fan cooler would not specifically form part of the single GTG and would be replaced by appropriate external ancillary equipment. The dimensions would be 6 metres high, 13 metres long and 10 metres wide. Whilst in the single GTG scenario this cooling equipment is separate from the GTG (unlike in the three to five GTG scenarios where the cooling equipment is integrated into the GTGs), there would still be considerably less infrastructure in the single GTG scenario than the five GTG scenario (the range of one to five GTGs being already consented in the Development Consent Order).
- For all GTG scenarios, the length of the black start diesel generator would be increased to 17 metres (previously 13 metres), the maximum height (5 metres) and width (5 metres) remain the same. This change of 4 metres is deminimus and would not be noticeable in the context of the built infrastructure.
- For all GTG scenarios, the single compound consented in the Development Consent Order for the natural gas receiving station and gas treatment compound (3 metres high x 50 metres long x 46 metres wide) would be replaced by two smaller compounds of the following dimensions which would be an overall reduction in the total built footprint.
  - Compound 1 – Natural Gas Receiving Station: 5 metres high x 36 metres wide and 50 metres long;
  - Compound 2 – Gas Treatment Compound: 5 metres high x 16 metres wide and 29 metres long. The approach to landscaping, design and lighting for the Power Generation Plant would be the same as the approved project.

5.4.3 The approach to landscaping, design and lighting for the Power Generation Plant would be the same as the approved project.

CONSTRUCTION

5.4.4 Construction and commissioning of the proposed Power Generation Plant would

remain the same between the project as currently consented and with the proposed changes. The same significant short term slight adverse visual effects on highly sensitive receptors would arise during this stage. Construction activities would have a direct effect on all areas required for the permanent works, as well as the construction area, and they would be temporary.

OPERATION

5.4.5 The new photomontages (refer to Appendix 5) illustrate the proposed Power Generation Plant in the single GTG scenario, which can be compared with the photomontage for the single consented unit. The proposed changes would have a minor visual impact at year one when landscape mitigation planting was least effective and would reduce over time as the planting developed and achieved its full effect by year fifteen.

5.4.6 The proposed change to the layout of the Power Generation Plant in the single GTG scenario repositions the tallest elements, the GTG and flue stack, further north (but all within the Order Limits and within the numbered work areas shown on the Works Plans which are secured via Requirement 3 of Schedule 2 to the Development Consent Order) and closer to similar taller industrial buildings at Eye Power Station and the National Grid Gas Compressor Station. The proposed arrangement is compact and visually cohesive.

5.4.7 The single wider stack (30m high) would be less noticeable in views from the surrounding landscape and less prominent on the skyline than the approved arrangement of up to five stacks (30m high). Although there are several tall flue stacks at Eye Airfield they are generally single stacks; the linear arrangement of five closely spaced stacks would be an unusual feature that would draw the eye.

5.4.8 The proposed changes to the dimensions and locations of other smaller structures within the Power Generation Plan would not be discernible in views from any of the viewpoint locations considered in the ES due to distance (>1km) except for one viewpoint on a PRoW near the entrance to Eye Airfield from Castleton Way. The difference between the proposed changes compared to the approved project would be minor when viewed from this location and other PRoWs at Eye Airfield when landscape mitigation planting had achieved its design objectives.

5.4.9 Table 5.2 sets out a comparison between the approved project and the proposed changes at operation in relation to each of the three viewpoint locations, which are illustrated in the new photomontages (see Appendix A).

5.4.10 This assessment has assumed the same growth rates for the landscape mitigation planting as the original ES whereby native species woodland planting will attain a height of approximately 2.5m five years after planting, 6m high after ten years, and 8 to 10m after fifteen years.

TABLE 5.2 COMPARISON OF THE VISUAL IMPACT OF THE APPROVED POWER GENERATION PLANT AND PROPOSED CHANGES AT OPERATION

VIEWPOINT / NEW FIG. NO.	LOCATION / DISTANCE/ RECEPTOR/SENSITIVITY	APPROVED PROJECT (5 No. GTG s and flue stacks)	PROPOSED CHANGES (Single GTG and flue stack)
VP2 Figure No. 5.1	B1077, Victoria Hill, Eye; 1.3km east of the Power Generation Plant site; Residential and Recreational; High	There would be a minor change to the existing view due to the increased extent of industrial structures at the new Power Generation Plant site. The tops of the 5 stacks would be seen as an equally spaced row just visible above the intervening mature woodland within the National Grid Gas Compressor Station. They would be prominent on the skyline and could not be fully mitigated. They would be similar to, but lower than the adjacent Eye Power Station stack (40m high) and National Grid mast (~50m high).	All of the structures, except the perimeter security fence would be located within the northern part of the Power Generation Plant site (Figure 1). In this location they would be screened by mature woodland next to the eastern boundary of the site within the National Grid Gas Compressor Station. Views of the GTG (maximum height 19m) would be screened by the mature woodland from year 1; it is assumed this woodland is mature and would not increase in height noticeably. The upper part of the Flue Stack (30m high) would be visible above the woodland and could not be fully mitigated. The Flue Stack would be in approximately the same position as the stack on the right hand side of the row of 5 and would be close to the National Grid communications mast (~50m high). Changes to the overall length and width of the building would not be apparent. The visible part of the stack would be 10 metres wide, slightly wider than the consented stacks (8.4 metres wide). The difference in width from the proposed change would be barely discernible at this distance. It would be the main new element that would be visible from this location and would be less noticeable than the approved

TABLE 5.2 COMPARISON OF THE VISUAL IMPACT OF THE APPROVED POWER GENERATION PLANT AND PROPOSED CHANGES AT OPERATION

			scheme comprising a row of up to five stacks of the same height. It is considered that the visual impact of a single, slightly wider stack would not be more adverse than the impact arising from five stacks. Therefore, the likely worst case of five stacks remains the same with the proposed changes. No change in the ES assessment.
		Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant	In respect of the single GTG with the proposed changes: Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant
VP3 Figure No. 5.2	Allotments and PRoW, Gaye Crescent, Eye; 1.1km south east of the Power Generation Plant site; Residential and Recreational; High	Views of the taller structures in the Power Generation Plant from the east would be partly screened by mature woodland within the National Grid Gas Compressor Station. The tops of the 5 stacks would be visible over the intervening mature woodland. Although they would be a minor change	Potential visual impacts arising from the proposed changes to the Power Generation Site would be broadly similar to viewpoint VP2. The site plan (Figure 1) indicates all of the structures, except the perimeter security fence, would be located within the northern part of the Power Generation Plant site where they would be substantially screened by mature woodland within the National Grid Gas Compressor Station next to the eastern boundary of the site. Views of the GTG (maximum height 19m) would be substantially screened by the mature woodland from

TABLE 5.2 COMPARISON OF THE VISUAL IMPACT OF THE APPROVED POWER GENERATION PLANT AND PROPOSED CHANGES AT OPERATION

		to the existing view, they would be prominent on the skyline. The stacks would be similar to, but lower than the adjacent Eye Power Station stack (40m high) and National Grid mast (~50m high).	year 1. The single flue stack (30m high) would be in approximately the same position as the stack on the right hand side of the row of 5 stacks in the approved project. It would be located close to the National Grid communications mast (~50m high) and the upper part of the stack would be visible above the mature woodland. The visible part of the stack would be 10 metres wide, slightly wider than the consented stacks (8.4 metres wide). The difference in width from the proposed change would be barely discernible at this distance. It would be the main new element that would be visible from this location and would be less noticeable than the approved scheme comprising a row of up to five stacks of the same height. It is considered that the visual impact of a single, slightly wider stack would not be more adverse than the impact arising from five stacks. Therefore, the likely worst case of five stacks remains the same with the proposed changes. No change in the ES assessment.
		Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant	In respect of the single GTG with the proposed changes: Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant

TABLE 5.2 COMPARISON OF THE VISUAL IMPACT OF THE APPROVED POWER GENERATION PLANT AND PROPOSED CHANGES AT OPERATION

VP11 Figure No. 5.3	Hall Farm, PRoW, Yaxley; 1.6km south of the Power Generation Plant site; Residential; High	The Power Generation Plant would represent an incremental increase in the extent of industrial development visible on the southern edge of the Airfield. The stacks would be visible on the skyline against woodland in the National Grid Gas Compressor Station. Once established, mitigation planting on the western and southern boundaries would integrate with existing woodland to form the visual horizon in views from further south. In the longer term, the change will be distinguishable but not prominent in the context of adjacent industrial development at Eye Airfield.	Figure 1 indicates all of the structures, except the perimeter security fence would be located within the northern part of the Power Generation Plant site up to ~40m further north than the approved project, which would increase the distance from these residential receptors to ~2km. At this distance the smaller buildings would be almost indistinguishable from adjacent industrial buildings at Eye Airfield. The increased size of the GTG (increase in length to 50m from 30m and width to 40 m from 30m) would be distinguishable at this distance at year 1, becoming less noticeable as the mitigation planting increased in height. The single flue stack (30m high) would be in approximately the same position as the northern stack in the approved project. The visible part of the stack would be 10 metres wide, slightly wider than the consented stacks (8.4 metres wide). The difference in width from the proposed change would be barely discernible at this distance. Although it would be noticeable on the skyline from this location, it would be less prominent than a row of up to five slightly narrower stacks of the same height. It would be seen in the context of similar taller structures and 135m high wind turbines. It is considered that the visual impact of a larger GTG

TABLE 5.2 COMPARISON OF THE VISUAL IMPACT OF THE APPROVED POWER GENERATION PLANT AND PROPOSED CHANGES AT OPERATION

			and single, wider stack would not be more adverse than the impact arising from five smaller GTGs and five narrower stacks.
		Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant	In respect of the single GTG with the proposed changes: Magnitude of change: Negligible Significance of effect: Slight Adverse, not significant

DECOMMISSIONING

5.4.12 The assessment of effects at decommissioning would be the same as those reported in the ES. The Power Generation Plant would be designed for an operating life of 25 years. During decommissioning, site activities would be similar to those during construction. Retention of the screen planting would substantially reduce visual impacts at this stage compared to the construction stage.

CUMULATIVE EFFECTS

5.4.13 A search of the National Infrastructure Planning register of applications and a search of Mid Suffolk District Council and Suffolk County Council's planning applications register has been undertaken. No new applications have been registered for Nationally Significant Infrastructure Projects or major planning applications that would be required to be considered in the assessment of cumulative effects.

5.4.14 No potential cumulative landscape or visual effects were reported in the ES in relation to the Power Generation Plant site and this conclusion remains the same.

MITIGATION AND RESIDUAL EFFECTS

5.4.15 The proposed changes to the Power Generation Plant would incorporate the same embedded mitigation in the design of all its elements and the same secondary mitigation as described in the original Landscape Mitigation Strategy (DCO Document No. 10.6), all of which are secured in the Development Consent Order through the Requirements.

5.4.16 In respect of landscape and visual effects, embedded mitigation would include:

- Utilising technology (SCGT) that will allow a significant reduction in stack height compared to other technology types and there will be no visible plume (parameters secured via Table 2 in Requirement 3 (as proposed to be amended in this application));
- The architectural design, use of materials and colours of the buildings and structures at Eye Airfield will be aesthetically pleasing and will assimilate the Power Generation Plant into the surrounding landscape (Requirement 3 secures detailed design and design principles);
- External lighting will be designed to reduce trespass and configured to avoid glare and spillage (Requirement 18 secures the Lighting Strategy);
- Surface water attenuation ponds will be designed as visually attractive areas that provide new ecological habitats (Requirement 10 secures the Ecological Mitigation Plan); and
- The design of perimeter security fencing and its alignment behind the screen woodland planting will provide a 'soft' outer edge to the Power Generation Plant site. At maturity it would integrate with woodland planting already established on adjacent sites at the National Grid Gas Compressor Station and Eye Power

Station (Requirements 7 and 10 secure Fencing and the Ecological Mitigation Plan.

5.4.17 The same measures as those set out in the Landscape Mitigation Strategy Proposals (Document Reference 10.6) (secured via Requirement 4 (Provision of Landscaping)) in relation to the Power Generation Plant would be undertaken to address specific residual adverse effects of the proposed changes that cannot be designed out. They will include:

- 10 to 20m wide belts of native species structure planting on the western and southern boundaries would provide partial visual screening and break up the large scale of the proposed Power Generation Plant to screen and break up the scale and mass of the buildings;
- Diverse habitats for wildlife; and
- Amenity tree/shrub planting and grass areas.

5.4.18 Structure planting on the southern boundary of the Power Generation Plant site would be subject to National Grid planting constraints in relation to gas pipelines.

5.4.19 Residual landscape impacts would be no worse than those originally reported. The extent of agricultural land lost and the area of proposed new woodland and hedgerow planting within the Power Generation Plant site would be the same. Residual impacts on landscape character would not be significant. It would be sited within an area largely dominated by similar industrial development.

5.4.20 Residual visual impacts arising from the proposed changes to the Power Generation Plant on high sensitivity receptors would also be no worse than originally reported. Visual effects would be localised due to the industrial character of the area adjoining the Power Generation Plant site at Eye Airfield, landscape mitigation planting, and by the surrounding offsite network of hedgerows and woodland.

5.5 CONCLUSIONS

5.5.1 It is concluded that the potential significance of landscape effects associated with the proposed changes are no greater than those previously assessed for the approved project. No significant landscape effects are predicted to arise at operation.

5.5.2 There would be no material change to the character of the view from the three selected viewpoints, or any of the other ES viewpoint locations that relate specifically to the Power Generation Plant. The assessed magnitude and significance of impact would not change. No significant visual effects are predicted to arise at operation.

6 AIR QUALITY

6.1 INTRODUCTION

6.1.1 The air quality assessment for the original EIA considered the impacts of the Project during construction, operation and decommissioning due to:

- Dust and particulate matter emissions generating during construction and decommissioning activities; and
- Stack emissions (nitrogen oxides and carbon monoxide) from the operation of the Power Generation Plant.

6.1.2 Impacts on human and ecological receptors as a result of direct exposure to pollutants in ambient air and as a result of the deposition of pollutants to the surface of the ground and vegetation were considered.

6.1.3 The assessment of impacts during construction and decommissioning was undertaken using a qualitative risk based approach; operational impacts were assessed quantitatively using detailed dispersion modelling.

6.2 SCREENING OF CONSTRUCTION/DECOMMISSIONING IMPACTS

6.2.1 The original assessment concluded that, with embedded mitigation measures (including a dust management plan), any impacts during the construction (and decommissioning) of the Project would be temporary and of negligible significance. Given the low sensitivity to dust effects of the nearest receptors (light industrial areas and agricultural land) no additional mitigation measures were considered necessary, and any residual impacts were assessed to be of negligible significance.

6.2.2 The proposed changes to the dimensions of the various aspects of the Project will have no material impact on the assessment of construction and decommissioning impacts.

6.2.3 The original assessment was based on the approach set out in Institute of Air Quality Management (IAQM) Guidance on the assessment of construction impacts (2011). The assessment has four stages:

- Identification of receptors in distance bands from the works and their sensitivity to air quality impacts;
- Assessment of particulate matter emissions potential;
- Assessment of the risk of impacts in the absence of mitigation; and
- Assessment of the significance of the effects following mitigation.

6.2.4 Decommissioning impacts were assumed in the original assessment to be equivalent to the construction impacts.

6.2.5 The proposed dimension changes for the Project will not affect the potential receptors since, to ensure a conservative (likely worst case) assessment, these were assessed in relation to the Order Limits as a whole, rather than in relation to distinct works areas. Furthermore, the Project dimension changes will not affect the assessment of the dust emissions potential of the works i.e. the emissions potential from earthworks remains large (since the total site area was, and remains, greater than the IAQM criteria of 10,000m^2) and the emissions potential from construction remains small (since the total volume remains less than the IAQM criteria of 25,000m^3, the majority of which will be prefabricated). In addition, the dimension changes will not result in any increase in the maximum number of construction vehicles accessing the site in any given day (linked to the assessed risk of track-out of dust from the site on the wheels and undercarriage of vehicles).

6.2.6 With no change to receptors or emissions potential, the risks of dust impacts are unchanged from the original assessment and, as such, there is no requirement for additional mitigation.

6.2.7 To conclude, the Project, including revised dimensions, will have a negligible likely impact on air quality during construction and decommissioning.

6.3 OPERATIONAL IMPACTS

6.3.1 The potential operational impacts of the Project relate to the impacts of exhaust emissions from the GTG(s).

6.3.2 The ground level impact of an emission to air is determined by various factors including atmospheric conditions and the effective height of the release. For all meteorological conditions, the higher the effective release height, the lower the ground level impacts.

6.3.3 The effective height of the release is, in turn, determined by the physical height of the release (the stack height), the height of nearby buildings and the buoyancy of the plume in providing initial plume rise before the exhaust gases become well mixed with the surrounding air.

6.3.4 It is well established that the buoyancy of a plume increases with increasing temperature of the exhaust gases and also with increasing volume flow. Therefore, to ensure a conservative (likely worst case) assessment of impacts, the original air quality assessment was based on a scenario employing five 59MW GTGs and it was assumed that the plumes from these generators do not merge. The revised Project dimensions do not affect the scenario employing five generators, but potentially affect the dispersion of pollutant from the single GTG scenario.

6.3.5 Whilst the single GTG scenario is, in general, expected to result in lower impacts than the five GTG scenario, due to the greater plume buoyancy described above, the increased dimensions of the single GTG may affect the downwash of pollutants in the wake of the unit. Increased downwash may increase ground level concentrations of pollutants, although these effects would be limited to the

immediate vicinity of the GTG[1].

6.3.6 Additional dispersion modelling has been undertaken to demonstrate that a single GTG scenario will result in (within the revised Project dimensions set out in Table 3-1) air quality impacts that are of equivalent significance to the five GTG scenario considered within the original assessment.

6.3.7 It should be noted that the increase in the external width of the flue stack, from 8.4m to 11m, applies to the lower section of the flue only and that the upper section of the flue increases from 8.4m to 10m. The change in external dimensions results from greater layers of casing and additional insulation. This has limited impact on the dispersion of pollutants. The dispersion of pollutants is affected by the internal size of the flue at the point of exit to atmosphere (top of the flue). Notwithstanding this, the additional modelling has been based on the increased flue of diameter 10m. This is considered a conservative assumption since it will minimise the assumed exit velocity and initial plume rise, and hence maximise the proportion of the plume subject to building downwash.

6.3.8 The basic methodology for the additional dispersion modelling follows that used for the original assessment, with the generator emissions data updated to a single generator option (Table 6-1).

Table 6-1 Emissions Parameters (per Generator) for the Project.

PARAMETER	ORIGINAL ASSESSMENT	SINGLE GENERATOR OPTION
Number	5	1
Discharge Location	In a row, oriented approximately south-west to north-east from (613272, 275047) to (613306, 275157)	613287, 275158
Discharge Height (m)	25	30
Flue Exit Diameter (mm)	4486	10000
Discharge Temperature (ºC)	479	580
Flow Rate (m3/s)	395	1780
Exit Velocity (m/s)	25	22

[1] The presence of buildings can affect plume rise and the initial dispersion of pollutants within the atmosphere. Turbulent wake zones can be created around buildings that force pollutants to the ground instead of allowing them to rise freely within the atmosphere. Building downwash occurs as the wind flows over and around buildings and impacts the dispersion of pollution from nearby stacks.

PARAMETER	ORIGINAL ASSESSMENT	SINGLE GENERATOR OPTION
NOX Concentration (mg/Nm3)	50	50
NOX Emission Rate (g/s)	6.61 [33.1g/s for all generators]	32.0
CO Concentration (mg/Nm3)	100	100
CO Emission Rate (g/s)	13.23 [66.15g/s for all generators]	64.0

6.3.9 Building downwash was taken into account in the original assessment with the inclusion of five GTGs with a footprint 39m x 16m and height of 10m (above ground level). Each stack was located at the centre of a turbine unit and each turbine unit was oriented approximately north-south.

6.3.10 The single GTG has a maximum height of 19m and a revised footprint of maximum length 50m and width 40m. It is a limitation of the ADMS dispersion model that all buildings must be represented as cuboid in shape. As such, the representation of the generator in the dispersion model is, of necessity, a simplification of its actual dimensions.

6.3.11 In specifying the building dimensions for the modelling, it is essential that the simplified representation appropriately captures the likely generation of the turbulent building wake. As a result, for the Project, the GTG was represented as building of dimension 19m (H) x 60m (L) x 30m (W), oriented approximately north-south with the stack located on the northern end. It is emphasised that these dimensions are to be used for the assessment of ***dispersion of pollutants only*** and assume that the lower section of the stack effectively acts as part of the building – given the size of the stack footprint, this is appropriate.

6.3.12 Black start generators are scoped out of this assessment as they are only used very rarely for short periods e.g. to start the generators when the National Gas Transmission System fails. Testing will also be limited. The increase of one to three black start generators will also result in no increased adverse effects.

6.3.13 The addition of a fin fan cooler, the splitting of the natural gas receiving station and gas treatment compound, and change in location of the switchyard will not affect emissions.

6.4 SUMMARY OF ORIGINAL ASSESSMENT

6.4.1 The original assessment concluded that there are no significant adverse residual effects associated with the operation of the Project.

6.4.2 With the stack height set in the range 25m to 30m, and NOX emissions at the limit

set by the IED (50mg/Nm3), the predicted effects of the Project on ambient air quality were negligible to slight adverse in significance. In particular, for ambient pollutant concentrations, total predicted environmental concentrations with the operation of the plant were well within the air quality objectives set in UK regulations for the protection of health and ecosystems.

6.4.3 For nitrogen and acid deposition, whilst existing levels were shown to exceed the minimum of the critical load range for all habitats, the realistic worst case impacts of the Project were imperceptible (<1% of the critical load) for all sites.

6.4.4 Predicted environmental concentrations of pollutants, considered for the Project in combination with other relevant development proposals, were well within the air quality objectives for the protection of human health. Cumulative impacts on ecological sites were imperceptible.

6.4.5 Overall, therefore, the assessment concluded that the Project will not give rise to any appreciable effects on sensitive habitats or human health during construction, operation or decommissioning.

6.5 UPDATED ASSESSMENT

IMPACTS ON HUMAN RECEPTORS

6.5.1 Table 6.2 shows the impact of the Project on maximum ground level concentrations of nitrogen dioxide with the original assessment (five unit) and revised (one unit) generator specifications. Nitrogen dioxide is the key pollutant for human health.

6.5.2 The revision to the specifications has no effect on the conclusions of the assessment. Maximum impacts increase with the one unit option in comparison to the five unit option presented in the original assessment. However, there is a negligible risk of exceedance of the objectives/EU limit values and, as such, no significant health effects are anticipated with the operation of the Project.

6.5.3 With the single GTG specification, the total predicted environmental concentration for annual mean nitrogen dioxide (taking into account likely operating hours in the year and background pollution concentrations) increases from 14.31µg/m^3 (36% of the objective of 40µg/m^3) to 15.96 (40% of the objective). The maximum hourly concentrations increase from 20.5µg/m^3 to 65.6µg/m^3 (10% to 33% of the objective of 200µg/m^3). However, predicted environmental concentrations remain less than 50% of the objective and hence no health effects are likely.

6.5.4 Impacts on carbon monoxide concentrations remain imperceptible with the one unit option.

Table 6-2 Maximum predicted concentrations of nitrogen dioxide, assessed against UK and EU air quality standards over 5 years of meteorological data.

SCENARIO	PROCESS CONTRIBUTION			PREDICTED ENVIRONMENTAL CONCENTRATION		
	Minimum	**Maximum**	**Max as % of Obj.**	**Minimum**	**Maximum**	**Max as % of Obj.**
	Annual Mean Nitrogen Dioxide (µg/m^3). Objective = 40µg/m^3					
Original (5 units)	0.22	0.31	0.8%	14.22	14.31	35.8%
Revised (1 Unit)	1.46	1.96	4.9%	15.46	15.96	39.9%
	Hourly Mean Nitrogen Dioxide (µg/m^3). Objective = 200µg/m^3					
Original (5 units)	15.7	20.5	10.2%	43.7	48.5	24.3%
Revised (1 Unit)	21.9	65.6	32.8%	49.9	93.5	46.8%

Minimum value = the lowest maximum annual average concentration modelled over the 5 years (2008 – 2012); maximum value = the highest maximum annual average concentration over the 5 years. Predicted Environment Concentration = Process Contribution plus Background Concentrations.

IMPACTS ON ECOLOGICAL RECEPTORS

6.5.5 Table 6-3 and Table 6-4 show the impact of the Project on annual mean and daily mean nitrogen oxides respectively over the various designated ecological sites for the five GTG and single GTG specifications.

6.5.6 The impacts of the specification revision are beneficial, with marked reductions in annual mean and daily mean impacts over all of the sites designated for nature conservation. In addition, total pollutant concentrations remain well below the air quality objectives / standards for the protection of ecosystems, whether the single GTG or five GTGs is in operation.

6.5.7 Since nitrogen deposition is directly proportional to the modelled concentration of nitrogen oxides, the impact of the specification revision on nitrogen deposition will also be beneficial.

6.5.8 For example, over Braiseworth Wood Local Nature Reserve, nitrogen deposition due to the Project was modelled to be 0.009kgN/ha/yr (0.09% of the critical load of 10kgN/ha/yr) with the 5 unit option. With the 1 unit option, this reduces to 0.002kgN/ha/yr (0.02% of the critical load).

Table 6-3 Maximum predicted concentrations of annual mean nitrogen oxides (µg/m^3), assessed over 5 years of meteorological data. Objective = 30µg/m^3

DESIGNATED SITE	PROCESS CONTRIBUTION				PREDICTED ENVIRONMENTAL CONCENTRATION			
	Original	As % of Obj.	Revised	As % of Obj.	Original	As % of Obj.	Revised	As % of Obj.
Waveney and Little Ouse Valley Fens SAC	0.011	0.04%	0.003	0.01%	22.01	73%	22.00	73%
Gypsy Camp Meadow SSSI	0.028	0.09%	0.005	0.02%	22.03	73%	22.00	73%
Major Farm, Braise-worth SSSI	0.044	0.15%	0.009	0.03%	22.04	73%	22.01	73%
The Penning LNR	0.050	0.17%	0.009	0.03%	22.05	73%	22.01	73%
Mellis Common LNR	0.020	0.07%	0.004	0.01%	22.02	73%	22.00	73%
Thrandeston Marsh LNR	0.025	0.08%	0.004	0.01%	22.02	73%	22.00	73%
Braiseworth Wood LNR	0.042	0.14%	0.009	0.03%	22.04	73%	22.01	73%

Maximum value = the highest maximum annual average concentration over the 5 years. Predicted Environment Concentration = Process Contribution plus Background Concentrations.

Table 6-4 Maximum predicted concentrations of daily mean nitrogen oxides (µg/m^3), assessed over 5 years of meteorological data. Standard = 75µg/m^3

DESIGNATED SITE	PROCESS CONTRIBUTION				PREDICTED ENVIRONMENTAL CONCENTRATION			
	Original	As % of Obj.	Revised	As % of Obj.	Original	As % of Obj.	Revised	As % of Obj.
Waveney and Little Ouse Valley Fens SAC	1.3	1.7%	0.65	0.9%	45.3	60%	44.7	60%
Gypsy Camp Meadow SSSI	5.9	7.9%	1.41	1.9%	49.9	67%	45.4	61%
Major Farm, Braise-worth SSSI	4.8	6.5%	1.47	2.0%	48.8	65%	45.5	61%

DESIGNATED SITE	PROCESS CONTRIBUTION				PREDICTED ENVIRONMENTAL CONCENTRATION			
The Penning LNR	6.3	8.4%	2.79	3.7%	50.3	67%	46.8	62%
Mellis Common LNR	4.4	5.9%	1.62	2.2%	48.4	65%	45.6	61%
Thrandeston Marsh LNR	6.3	8.4%	2.39	3.2%	50.3	67%	46.4	62%
Braiseworth Wood LNR	4.8	6.4%	1.47	2.0%	48.8	65%	45.5	61%

Maximum value = the highest maximum annual average concentration over the 5 years. Predicted Environment Concentration = Process Contribution plus Background Concentrations.

CUMULATIVE EFFECTS

6.5.9 A search of the National Infrastructure Planning register of applications and a search of Mid Suffolk District Council and Suffolk County Council's planning applications register has been undertaken. No new applications have been registered for Nationally Significant Infrastructure Projects or major planning applications that would be required to be considered in the assessment of cumulative effects.

6.5.10 The original assessment explicitly modelled the cumulative impact of the Project with the existing and proposed wind turbines in the vicinity of the Project. The conclusion of the cumulative assessment was that the maximum impacts of the operation of the GTG(s) increase in comparison to the maximum concentrations without the turbines. However, the increase was not significant, amounting to approximately 1% or less of the relevant air quality objectives.

6.5.11 Similar conclusions apply with the revised specification. Maximum concentrations increase slightly, but the increase does not result in significant impacts.

MITIGATION AND RESIDUAL EFFECTS

6.5.12 No significant impacts are predicted to arise as a result of the operation of the Project and, as such, the Project does not warrant mitigation beyond that implicitly included in the design, namely a stack height between 25 and 30m inclusive, and emissions control to maintain emissions within the limits set by the IED. This applies with the revised specifications.

6.6 CONCLUSIONS

6.6.1 The proposed changes have no material impact on the conclusions of the original ES.

6.6.2 Overall, the Project, with proposed changes, will continue to have a negligible likely

impact on air quality in relation to both human and ecological receptors during construction, operation and decommissioning. This applies both for the Project alone and in combination with other proposed facilities in the vicinity of the Project site.

6.6.3 Impacts on ecological receptors will be imperceptible.

6.6.4 This applies both for the Project alone and in combination with other proposed facilities in the vicinity of the Project site.

7 CONCLUSIONS

7.1.1 The outcome of the screening and updated assessments confirms that the conclusions in the ES remain valid for the proposed changes. The significance of the impact would be unchanged or reduced. It is therefore considered that the proposed changes are non-material amendments for the purposes of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011.

FIGURES

Revision	0
Drawing Number	Figure 1
Job Number	7004321B

NORTH

Eye Industrial Park

Mast

Pond

Tanks

WB

Factory

Airfield disused

El Sub Sta

ATTENUATION POND

CONTROL ROOM/ OFFICE/WORKSHOP

CAR PARK

RAW/FIRE WATER TANK

DEMIN WATER TANK

SWITCHYARD/ BANKING COMPOUND

FLUE STACK

GAS TURBINE BUILDING

SWITCHGEAR BUILDING

FIN FAN COOLER

GATE HOUSE

GAS RECEIVING STATION

GAS TREATMENT COMPOUND

BLACK START GENERATORS

SITE ACCESS

SITE FENCE

GAS CONNECTION ROUTE

ELECTRICAL CONNECTION ROUTE

ORDER LIMITS

LAYDOWN AND MAINTENANCE COMPOUND

GRAVEL AREA

20 0 20 40 60 80 100m

ORIGINAL SCALE 1:1000

Rev	Date	Description	By	Chk	App
0	15/08/16	First Issue	SPS	RAB	RAB

INDICATIVE

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Client: PROGRESS POWER

Site/Project: Progress Power Project

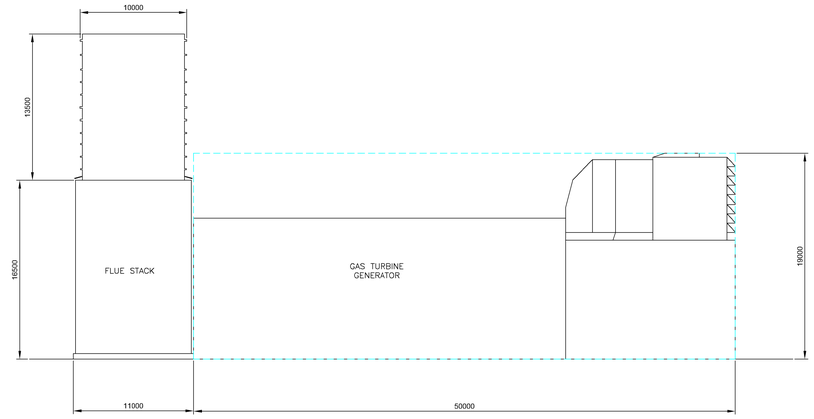
Title: SITE PLAN POWER GENERATION PLANT Reg5(2)(o)

Drawn: SPS		Checked: RAB	
Designed: RAB		Approved: RAB	
Date: 15/08/16	Scale: 1:1000	A1	Sheet: 1 OF 1

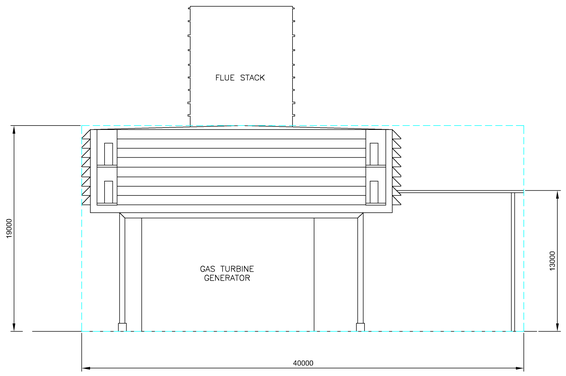
Project Number:	Drawing Number:	Revision:
7004321B	Figure 1	0

Drawing Number: 7004321B
Figure 2
0

AMENDED DCO DIMENSIONS



NORTH ELEVATION



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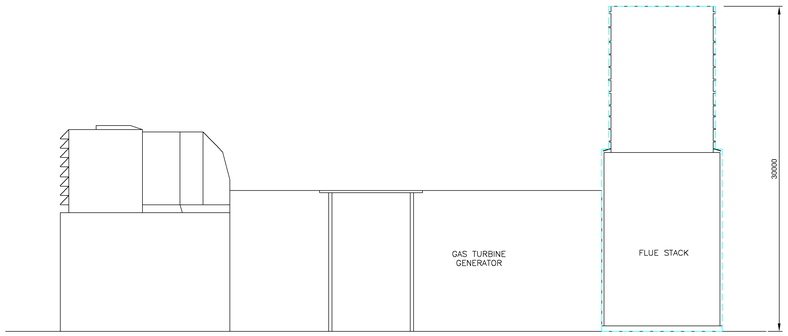

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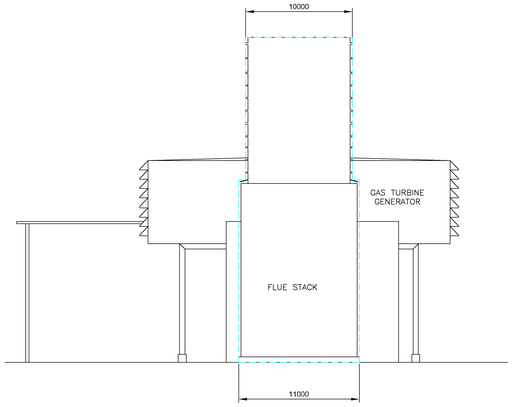

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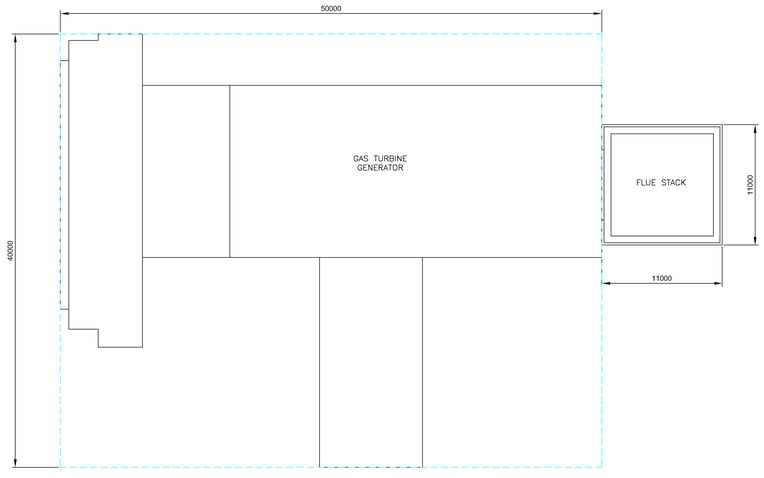

PLAN

5 0 5 10 15 20m

ORIGINAL SCALE 1:200

Rev	Date	Description	By	Chk	App
0	15/08/16	First Issue	SPS	RAB	RAB

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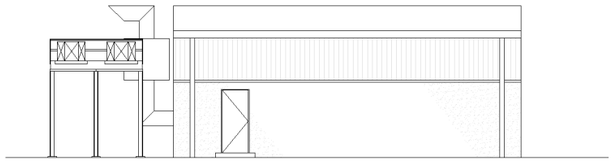
Site/Project:
Progress Power Project

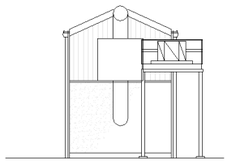
Title:
GAS TURBINE GENERATOR
PLAN & ELEVATIONS
Reg5(2)(o)

Drawn: SPS		Checked: RAB	
Designed: RAB		Approved: RAB	
Date: 15/08/2016	Scale: 1:200	A0	Sheet: 1 OF 1

Project Number:	Drawing Number:	Revision:
7004321B	Figure 2	0



NORTH ELEVATION



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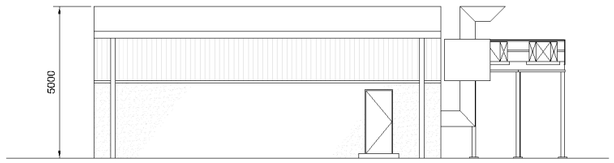
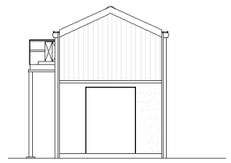
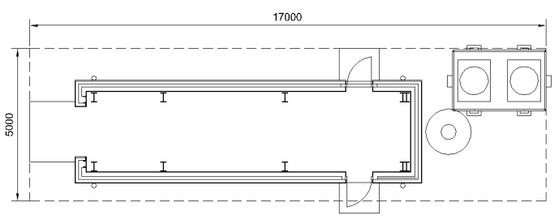


SOUTH ELEVATION



WEST ELEVATION



PLAN

LEGEND

-------- MAXIMUM DIMENSIONS AS SET OUT IN REQUIREMENT 4 SCHEDULE 2 OF THE DRAFT AMENDED DCO.

ORIGINAL SCALE 1:100

Rev	Date	Description	By	Chk	App
0	15/08/16	First Issue	SPS	RAB	RAB

INDICATIVE

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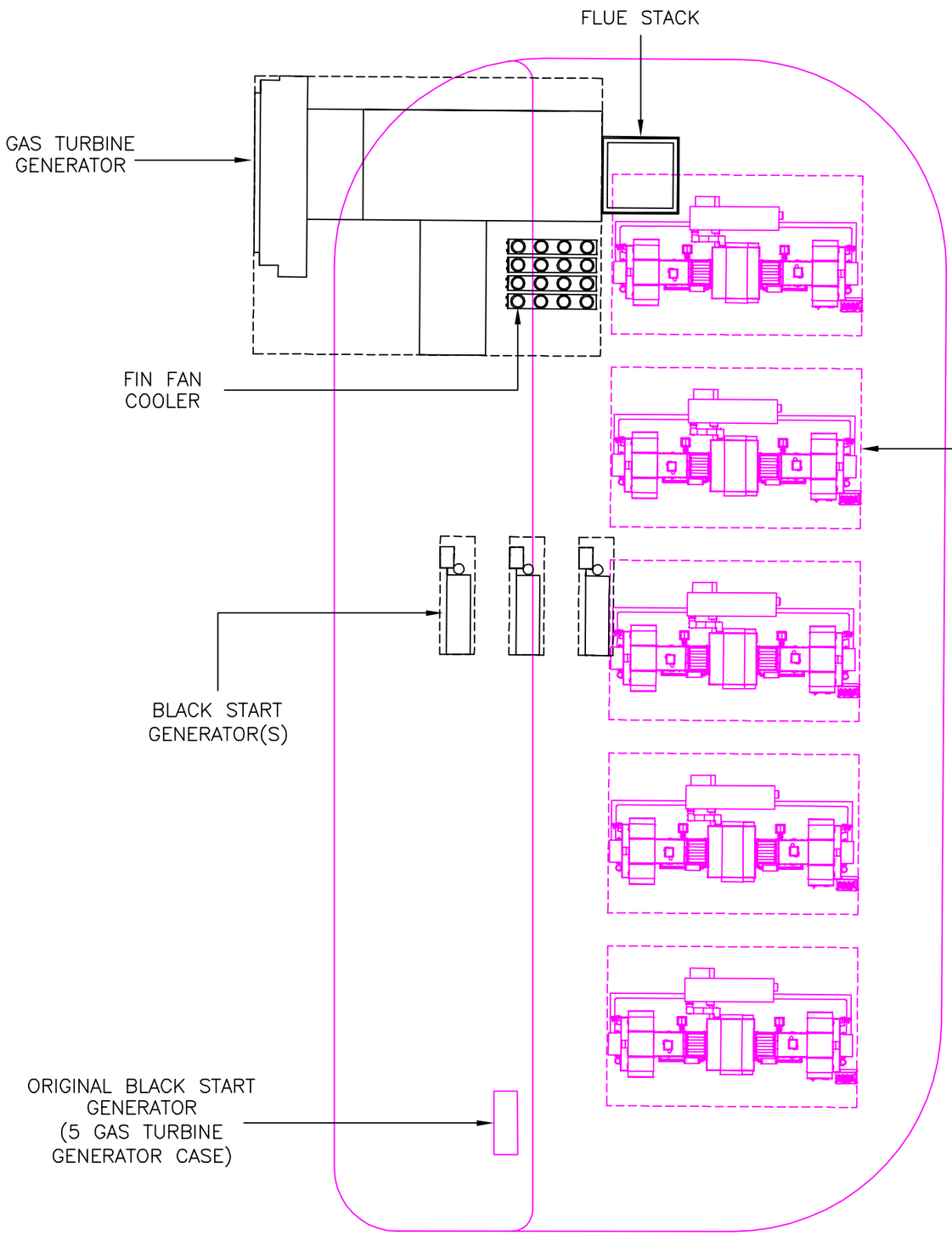
Site/Project: Progress Power Project

Title: BLACK START GENERATOR PLAN & ELEVATIONS Reg5(2)(o)

Drawn: SPS		Checked: RAB	
Designed: RAB		Approved: RAB	
Date: 15/08/2016	Scale: 1:100	A1	Sheet: 1 OF 1

Project Number:	Drawing Number:	Revision:
7004321B	Figure 4	0

Project Number	Drawing Number	Revision
7004321B	Figure 5	0



FOOTPRINT AS PER INDICATIVE LAYOUTS OF AMENDED SINGLE GAS TURBINE GENERATOR, FIN FAN COOLER AND 3 AMENDED BLACK START GENERATORS 2506m²

FOOTPRINT AS PER INDICATIVE LAYOUTS OF 5 GAS TURBINE GENERATORS AND ORIGINAL BLACK START GENERATOR 4200m²

====== MAX DIMENSIONS

10 0 10 20 30 40 50m

ORIGINAL SCALE 1:750

Rev	Date	Description	By	Chk	App
0	15/08/16	FIRST ISSUE	SPS	RAB	RAB

INDICATIVE

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Site/Project: Progress Power Project

Title: GAS TURBINE GENERATOR OVERLAY Reg5(2)(o)

Drawn:	SPS	Checked:	RAB
Designed:	RAB	Approved:	RAB
Date: 15/08/2016	Scale: 1:750	A3	Sheet: 1 OF 1

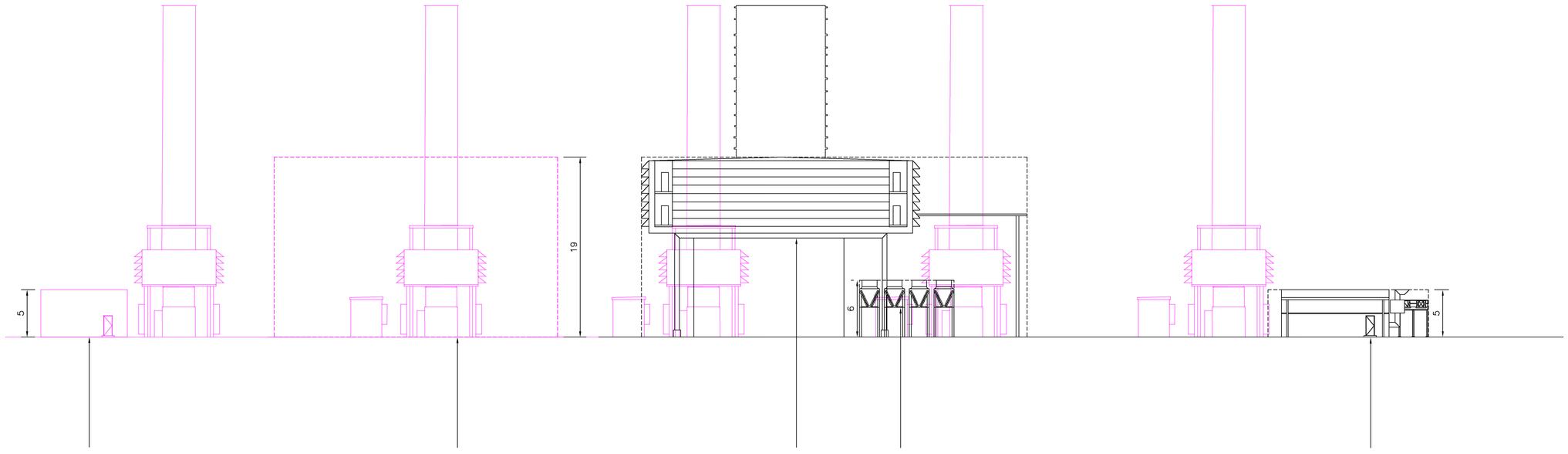
Project Number:	Drawing Number:	Revision:
7004321B	Figure 5	0

Project Number: 7004321A | Drawing Number: Figure 6 | Revision: 0

ELEVATIONS OF SINGLE GAS TURBINE SITE CASE FOR AMENDED DCO

ELEVATIONS OF FIVE GAS TURBINE GENERATORS SITE CASE FOR CONSENTED DCO

MAX DIMENSIONS



ORIGINAL BLACK START GENERATOR (5 GAS TURBINE GENERATOR CASE)

ORIGINAL GAS TURBINE GENERATOR (5 GAS TURBINE GENERATOR CASE)

GAS TURBINE GENERATOR

FIN FAN COOLER

BLACK START GENERATOR(S)

5 0 5 10 15 20m

ORIGINAL SCALE 1:250

Rev	Date	Description	By	Chk	App
0	15/08/16	First Issue	SPS	RAB	RAB

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Site/Project: Hirwaun Power Project

Title: GAS TURBINE GENERATOR, BLACK START GENERATOR AND FIN FAN COOLER ELEVATIONS Reg5(2)(o)

Drawn: SPS		Checked: RAB	
Designed: RAB		Approved: RAB	
Date: 15/08/2016	Scale: 1:250	A1	Sheet: 1 OF 1

Project Number:	Drawing Number:	Revision:
7004321A	Figure 6	0

Appendix 3

Proposed Amendments to Schedule 1 of the Order

SCHEDULE 1

Article 3

AUTHORISED DEVELOPMENT

In the County of Suffolk and the District of Mid Suffolk—

A nationally significant infrastructure project as defined in sections 14(1)(a) and 15 of the 2008 Act comprising—

Work No. 1 – a simple cycle gas fired peaking power generating station on the site of the former

Eye airfields in Eye, Mid Suffolk with a gross rated electrical output of up to 299MWe comprising—

(1) ***Work No. 1A***—

(a) up to 5 gas turbine generators; and

(b) up to 5 exhaust gas emission flue stacks,

(2) ***Work No. 1B***—

(a) an administration building;

(b) a store;

(c) a control room/office/workshop;

(d) telemetry apparatus;

(e) 3 black start diesel generators where one gas turbine generator is constructed and 1 black start diesel generator where two, three, four or five gas turbine generators are constructed;

Deleted: a black start diesel generator

(f) a raw/fire water tank and demineralised water storage tank;

(g) a natural gas receiving station and gas treatment compound containing—

(i) a pipeline inspection gauge (PIG) receiving facility;

(ii) isolation valves, metering, heating, filtering, compression, pressure regulation equipment;

(iii) electricity supply kiosk; and

(iv) control and instrumentation kiosks,

(3) ***Work No. 1C*** – a switchyard / banking compound containing up to seven transformers, switchgear building and other plant required to manage the transmission of electricity,

(4) ***Work No. 1D***—

(a) security infrastructure, including cameras, perimeter fencing and a gatehouse;

(b) site lighting infrastructure, including perimeter lighting columns;

(c) internal roadways, car parking, pedestrian network, cycle parking, hardstanding and water treatment trailers;

(d) site drainage, attenuation pond and waste management infrastructure;

(e) electricity, water, wastewater and telecommunications and other services;

(f) landscaping including tree planting, fencing and other boundary treatments and ecological mitigation;

(g) high voltage and low voltage cabling, equipment and controls and associated telemetry and electrical protection auxiliary cabling;

(h) underground gas pipeline connection, associated telemetry and cathodic protection test / transformer rectifier unit;

(i) other ancillary equipment including external fin fan cooler; and

(j) new means of accesses from Potash Lane including permanent road surface, drainage, gates and fencing,

Work No. 2—

(a) a maintenance compound including new hardstanding,

(b) landscaping including tree planting, fencing and other boundary treatments; and

(c) site drainage,

Associated development within the meaning of section 115(2) of the 2008 Act in connection with the nationally significant infrastructure project referred to in Work No. 1 comprising—

Work No. 3A—

(a) an above ground installation (also referred to as a minimum offtake connection compound) containing—

(i) a minimum offtake connection comprising remotely operable valves, control and instrumentation kiosks and electrical supply kiosks;

(ii) a pipeline inspection gauge (PIG) facility, comprising a PIG launching facility, emergency control valves, isolation valves, control and instrumentation kiosks, and electricity supply kiosks;

(b) security infrastructure, including cameras, lighting (including perimeter lighting columns) and perimeter fencing;

(c) site drainage and waste management infrastructure;

(d) electricity and telecommunications connections and other services;

(e) below ground sacrificial anode pit; and

(f) landscaping including tree planting, fencing and other boundary treatments and ecological mitigation,

Work No. 3B – new means of access between Potash Lane and numbered work 3A, including signing and road markings works, permanent road surface, gates, fencing, drainage, infilling, landscaping and tree and hedge removal and other incidental works,

Work No. 4—

(a) a new underground gas pipeline connection and telemetry cabling, approximately 1.7 km in length connecting the natural gas receiving station and gas treatment compound in Work No. 1B to Work No. 3A;

(b) pipeline field marker posts and cathodic protection test/ transformer rectifier unit;

(c) below ground drainage works;

(d) tree and hedge removal; and

landscaping including tree planting, fencing and other boundary treatments and ecological mitigation.

Work No. 5—

(a) 400 kV substation and site office and welfare accommodation;

(b) 400 kV cable sealing end compound;

(c) underground high voltage electrical cables and associated telemetry and electrical protection auxiliary cabling;

(d) security infrastructure including perimeter fencing with gates, security cameras and site lighting;

(e) landscaping including bunds, tree planting, fencing and other boundary treatments and ecological mitigation;

(f) site drainage and waste management infrastructure; and

(g) internal roadways, car parking, pedestrian network and hardstanding for planned maintenance.

Work No. 6—

(a) an underground 400 kV electrical cable circuit and associated telemetry and electrical protection auxiliary cabling, approximately 1.6 km in length; and

(b) joint bays in relation to Work No. 6a.

Work No. 7 – new means of access between Work No. 5 and the A140 including road widening, new turning lane, signing and road markings works, permanent road surface, gates, fencing, drainage, infilling, landscaping and tree and hedge removal and other incidental works,

In connection with Works No. 1 to 7, and to the extent that they do not otherwise form part of any such works, further associated development comprising such other works or operations as may be necessary or expedient for the purposes of or in connection with the construction, operation and maintenance of the works in this Schedule, whether or not shown on the plans referred to in the Requirements, and falling within the scope of the works assessed in the environmental statement.

Appendix 4

Proposed Amendments to Table 2 in Requirement 4 of Schedule 2 of the Order

Building or structure	***Maximum height (metres above existing site level of approximately 48.5 metres AOD)***	***Minimum height (metres above existing site level of approximately 48.5 metres AOD)***	***Maximum length (metres)***	***Minimum length (metres)***	***Maximum width (metres)***	***Minimum width (metres)***
Each gas turbine generator (where one gas turbine generator is constructed) (part of numbered work 1A)	19.0	-	50.0	-	40.0	-
Each gas turbine generator (where ~~one or~~ two gas turbine generators are constructed) (part of numbered work 1A)	19.0	-	30.0	-	30.0	-
Each gas turbine generator (where three, four or five gas turbine generators are constructed) (part of numbered work 1A)	10.0	-	36.0	-	23.0	-

Building or structure	***Maximum height (metres above existing site level of approximately 48.5 metres AOD)***	***Minimum height (metres above existing site level of approximately 48.5 metres AOD)***	***Maximum length (metres)***	***Minimum length (metres)***	***Maximum width (metres)***	***Minimum width (metres)***
Each exhaust gas emission flue stack (where one gas turbine generator is constructed) (part of numbered work 1A)	30.0	25.0	-	-	11.0 metres up to and including a height of 16.5 metres above 48.5m AOD and 10 metres from a height of 16.5 metres above 48.5m AOD to a height of 30.0 metres above 48.5m AOD	-
Each exhaust gas emission flue stack (where ~~one or~~ two gas turbine generators are constructed) (part of numbered work 1A)	30.0	25.0	-	-	8.4	-
Each exhaust gas emission flue stack (where three, four or five gas turbine generators are constructed) (part of numbered work 1A)	30.0	25.0	-	-	6.0	-

Building or structure	***Maximum height (metres above existing site level of approximately 48.5 metres AOD)***	***Minimum height (metres above existing site level of approximately 48.5 metres AOD)***	***Maximum length (metres)***	***Minimum length (metres)***	***Maximum width (metres)***	***Minimum width (metres)***
Control room/office/ workshop (part of numbered work 1B)	6.0	-	29.0	-	23.0	-
~~Black~~ Each black start diesel generator (part of numbered work 1B)	5.0	-	~~13.0~~17.0	-	5.0	-
Raw/fire water tank (part of numbered work 1B)	11.0	-	11.0	-	11.0	-
Demineralised water tank (part of numbered work 1B)	2.0	-	2.0	-	2.0	-
Natural gas receiving station (part of numbered work 1B)	5.0	-	50.0	-	36.0	-
Gas ~~receiving station~~ treatment compound (part of numbered work 1B)	~~3.0~~5.0	-	~~50.0~~29.0	-	~~46.0~~16.0	-
Switchyard /banking compound (numbered work 1C)	11.3	-	60.0	-	60.0	-
Switchgear Building (part of numbered work 1C)	11.3	-	21.0	-	15.0	-
Gatehouse (part of numbered work 1D)	4.5	-	9.0	-	8.0	-

Building or structure	***Maximum height (metres above existing site level of approximately 48.5 metres AOD)***	***Minimum height (metres above existing site level of approximately 48.5 metres AOD)***	***Maximum length (metres)***	***Minimum length (metres)***	***Maximum width (metres)***	***Minimum width (metres)***
Above ground installation (numbered work 3A)	3.0	-	72.0	-	52.0	-
Pipeline inspection gauge facility (part of numbered work 3A)	2.0	-	36.0	-	27.0	-
Minimum offtake connection (part of numbered work 3A)	2.0	-	36.0	-	25.0	-
Sealing end compound (part of numbered work 5)	12.5	-	22.0	-	45.0	-
Substation: (gas insulated substation) – (maximum compound size) (part of numbered work 5)(gas insulated substation) – (indoor switchgear hall) (part of numbered work 5)	12.5 12.5	- -	80.0 21.0	- -	100.0 62.0	- -
External fin fan cooler (where one gas turbine generator is constructed) (part of numbered work 1D)	6.0	-	13.0	-	10.0	-

Appendix 5

Photomontages

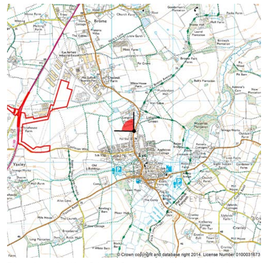
Power Generation Plant

Viewpoint Information

Grid Reference:	614365 : 274509
Elevation:	41m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.3km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

PROGRESS POWER

SHEPPARD ROBSON

6th Floor 78 St Vincent Street Glasgow G2 5UB
T: +44 (0)141 285 3100 E: glasgow@sheppardrobson.com

Project Title
Progress Power Project

Drawing Title
Viewpoint VP02 : Victoria Hill (B1077), Eye
Power Generation Plant as Existing

Drawing Number
Figure 5.1 Sheet 1 of 2

Date	**25/07/16**	Status	**Final**
Paper	**840x597mm**	Approved	**CM**

Photomontage Year One

Power Generation Plant Consented Under the DCO for Five GTGs

Photomontage Year One

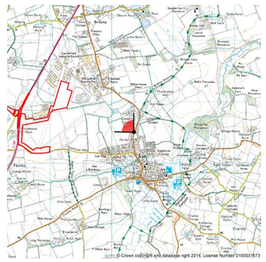
Proposed Power Generation Plant for One GTG

Viewpoint Information

Grid Reference:	614365 : 274509
Elevation:	41m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.3km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

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Project Title
Progress Power Project

Drawing Title
Viewpoint VP02 : Victoria Hill (B1077), Eye Power Generation Plant Year 1

Drawing Number
Figure 5.1 Sheet 2 of 2

Date	**25/07/16**	Status	**Final**
Paper	**840x597mm**	Approved	**CM**

Progress Power | Size 840mm x 550mm | Figure 5.1 | VP02 | Location: Victoria Hill (B1077), Eye | Grid Reference: 614365, 274509

Photomontage Year One

Power Generation Plant Consented Under
the DCO for One GTG

Photomontage Year One

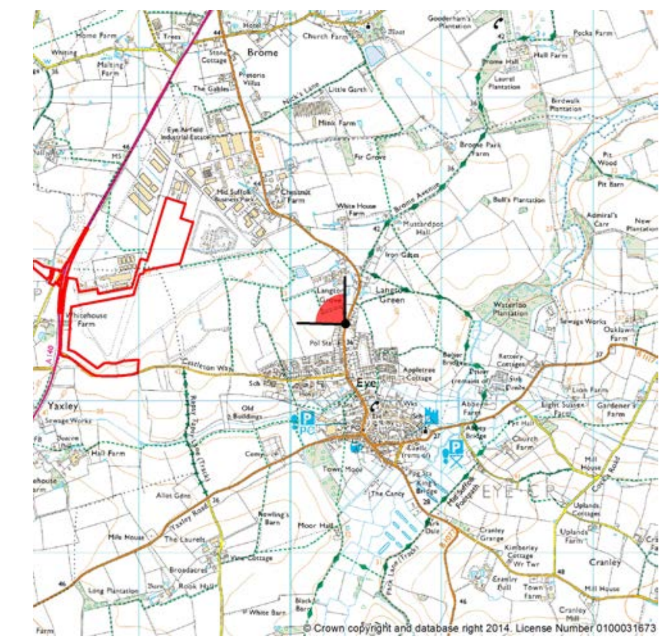
Proposed Power Generation Plant for One GTG

Viewpoint Information

Grid Reference:	614365 : 274509
Elevation:	41m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.3km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

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Project Title
Progress Power Project

Drawing Title
Viewpoint VP02 : Victoria Hill (B1077), Eye
Power Generation Plant Year 1

Drawing Number
Figure 5.1 Sheet 2 of 2

Date	**25/07/16**	Status	**Final**
Paper	**840x597mm**	Approved	**CM**

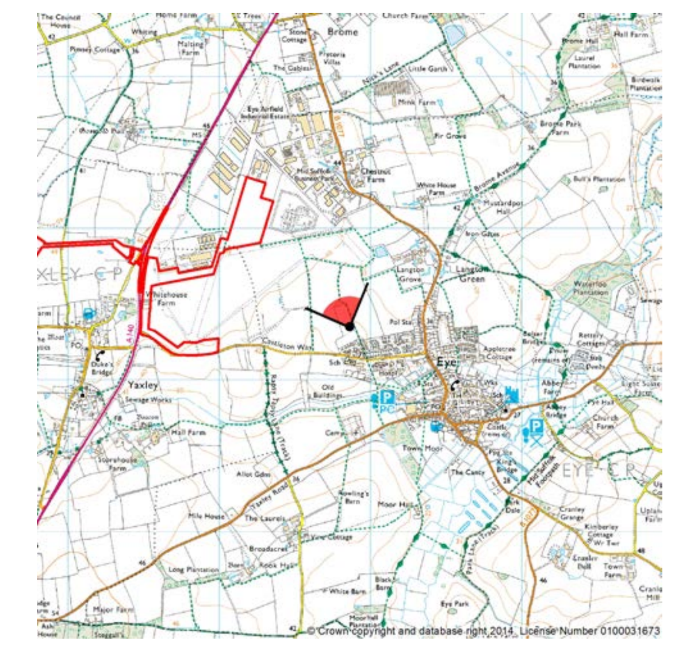
Power Generation Plant

Viewpoint Information

Grid Reference:	613862 : 274352
Elevation:	40m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90º
Camera & Lens:	Digital SLR Nikon D3200.
	Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.1km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

PROGRESS POWER

SHEPPARD ROBSON

6th Floor 78 St Vincent Street Glasgow G2 5UB
T: +44 (0)141 285 3100 E: glasgow@sheppardrobson.com

Project Title
Progress Power Project

Drawing Title
Viewpoint VP03 : Allotments off Gaye Crescent, Eye
Power Generation Plant as Existing

Drawing Number
Figure 5.2 Sheet 1 of 2

Date	**21/08/14**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**

Photomontage Year One

Power Generation Plant Consented Under the DCO for Five GTGs

Photomontage Year One

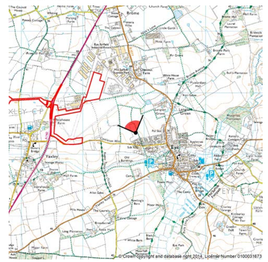
Proposed Power Generation Plant for One GTG

Viewpoint Information

Grid Reference:	613862 : 274352
Elevation:	40m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.1km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

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6th Floor 78 St Vincent Street Glasgow G2 5UB
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Project Title
Progress Power Project

Drawing Title
Viewpoint VP03 : Allotments off Gaye Crescent, Eye Power Generation Plant Year 1

Drawing Number
Figure 5.2 Sheet 2 of 2

Date	**21/08/14**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**

Progress Power | Size 840mm x 550mm | Figure 5.2 | VP03 | Location: Allotments off Gaye Crescent, Eye | Grid Reference: 613862 : 274352

Photomontage Year One

Power Generation Plant Consented Under the DCO for One GTG

Photomontage Year One

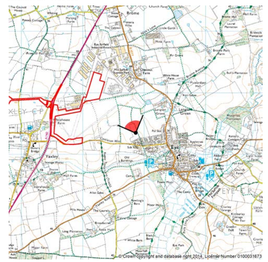
Proposed Power Generation Plant for One GTG

Viewpoint Information

Grid Reference:	613862 : 274352
Elevation:	40m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	1.1km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



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Project Title

Progress Power Project

Date	**21/08/14**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**

Progress Power | Size 840mm x 550mm | Figure 5.2 | VP03 | Location: Allotments off Gaye Crescent, Eye | Grid Reference: 613862 : 274352

Power Generation Plant

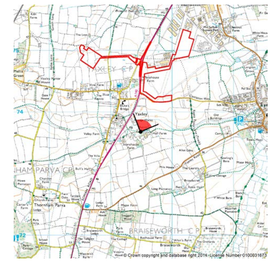
Above Ground Installation

Viewpoint Information

Grid Reference:	612489 : 273679
Elevation:	45m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	0.5km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1: 50,000



Client

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Project Title
Progress Power Project

Drawing Title
Viewpoint VP11 : Hall Farm, Yaxley
Power Generation Plant & Above Ground Installation as Existing

Drawing Number
Figure 5.3 Sheet 1 of 2

Date	**02/08/16**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**

Photomontage Year One

Power Generation Plant Consented Under the DCO for Five GTGs

Above Ground Installation Consented Under the DCO

Photomontage Year One

Proposed Power Generation Plant for One GTG

Above Ground Installation Proposed Changes

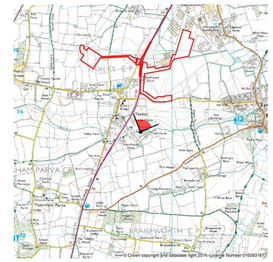
Progress Power | Size 840mm x 550mm | Figure 5.3 | VP11 | Location: Hall Farm, Yaxley | Grid Reference: 612489 : 273679

Viewpoint Information

Grid Reference:	612489 : 273679
Elevation:	45m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	0.5km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1: 50,000



Client

PROGRESS POWER

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Project Title
Progress Power Project

Drawing Title
Viewpoint VP11 : Hall Farm, Yaxley
Power Generation Plant & Above Ground Installation
Year 1

Drawing Number
Figure 5.3 Sheet 2 of 2

Date	**02/08/16**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**

Photomontage Year One

Power Generation Plant Consented Under the DCO for One GTG

Above Ground Installation Consented Under the DCO

Photomontage Year One

Proposed Power Generation Plant for One GTG

Above Ground Installation Proposed Changes

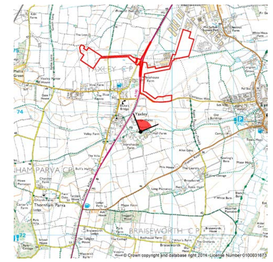
Progress Power | Size 840mm x 550mm | Figure 5.3 | VP11 | Location: Hall Farm, Yaxley | Grid Reference: 612489 : 273679

Viewpoint Information

Grid Reference:	612489 : 273679
Elevation:	45m
Viewer Height:	1.6m
Viewing Distance:	463mm
Angle Width:	90°
Camera & Lens:	Digital SLR Nikon D3200. Nikkor afs dx 35mm Fixed f1.g Lens
Date Taken:	17/02/14
Distance from Project:	0.5km

* Images should be curved in a concave manner towards the Viewer to show the right perspective

Location Plan - 1 : 50,000



Client

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T: +44 (0)141 285 3100 E: glasgow@sheppardrobson.com

Project Title
Progress Power Project

Drawing Title
Viewpoint VP11 : Hall Farm, Yaxley
Power Generation Plant & Above Ground Installation
Year 1

Drawing Number
Figure 5.3 Sheet 2 of 2

Date	**02/08/16**	Status	**Final**
Paper	**840x550mm**	Approved	**CM**