The Eggborough CCGT Project

Document Ref: 5.10
PINS Ref: EN010081

The Eggborough CCGT (Generating Station) Order

Land at and in the vicinity of the Eggborough Power Station site, near Selby, North Yorkshire, DN14 0BS

Indicative Landscape and Biodiversity Strategy

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(q)

Applicant: Eggborough Power Limited
Date: May 2017

DOCUMENT HISTORY

Document Number	5.10		
Revision	01		
Author	Steven Ward MCIEEM, Rebecca Condillac CMLI		
Signed	[redacted]	**Date**	May 2017
Approved By	Kirsty Cobb		
Signed	KC	**Date**	May 2017
Document Owner	AECOM		

GLOSSARY

Abbreviation	Description
AGI	Above Ground Installation
BAP	Biodiversity Action Plan
BS	British Standard
CCGT	Combined Cycle Gas Turbine
CoW	Clerk of Works
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
EPH	Energetický A Prumyslový Holding
EPL	Eggborough Power Limited
GI	green infrastructure
km	Kilometres
kV	Kilovolt
MW	Megawatts
NERC Act	Natural Environment and Rural Communities Act 2006
NJUG	National Joint Utilities Group
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NTS	National Transmission System
NYCC	North Yorkshire County Council
PA 2008	The Planning Act 2008
SDC	Selby District Council
SoS	Secretary of State
WCA	Wildlife and Countryside Act 1981

CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

This Indicative Landscape and Biodiversity Strategy has been prepared on behalf of Eggborough Power Limited and forms part of the application for a Development Consent Order (DCO) for the construction, operation and maintenance of a new gas-fired electricity generating station (the 'Proposed Development') on land within and to the north of the existing Eggborough coal-fired power station, near Selby, North Yorkshire.

The purpose of this document is to set out the proposed strategy to mitigate the effects of the Proposed Development on landscape and biodiversity features and to enhance the biodiversity, landscape and green infrastructure (GI) value of the Site.

The Environmental Impact Assessment (EIA) identified no significant effects on landscape character or biodiversity features as a result of the Proposed Development. No mitigation is therefore required. However, there remains a need to minimise impacts on protected/ notable species and trees. It is also necessary to provide enhancements to compensate for unavoidable losses of habitat, enhance the landscape character and improve the green infrastructure network in order to meet local and national planning policy.

This document describes the landscape and biodiversity impact avoidance measures that would be implemented prior to and during construction of the Proposed Development, as well as the enhancement, management and monitoring measures to be implemented once the Proposed Development is operational.

The proposed landscape and biodiversity enhancement measures are summarised below. The proposals have been designed to be delivered within the existing coal-fired power station, as well as to retain the integrity of the screening function provided by the existing plantation woodlands on the boundary of the Site. New habitat creation and landscaping are accommodated, where feasible, but the main focus is on protection and enhancement of existing habitats. The key measures proposed are:

- management of retained areas of screening woodland to enhance their landscape and biodiversity value, including infill tree planting, understorey scrub planting, ground flora planting, provision of dead wood habitat piles and provision of wildlife boxes;
- biodiversity enhancements to a proposed new surface water attenuation pond in the Proposed Construction Laydown area, including the establishment of marginal aquatic vegetation, as well as species rich grassland and scrub in surrounding areas;
- botanical enhancement of existing areas of species poor grassland;
- replacement hedgerow planting and diversification within the Site;
- screening planting of trees and scrub around the AGI; and
- seeding areas of currently unsurfaced areas of land set aside for Carbon Capture Readiness (CCR) with grassland and wildflowers.

Biodiversity offsetting metrics have been used to quantify the biodiversity value of the proposed enhancement measures and to compare these to the biodiversity value of proposed losses to demonstrate that the Proposed Development can achieve no net loss and net gain of biodiversity.

1.0 INTRODUCTION

Overview

1.1 This Indicative Landscape and Biodiversity Strategy has been prepared on behalf of Eggborough Power Limited ('EPL' or the 'Applicant'). It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy, under section 37 of 'The Planning Act 2008' (the 'PA 2008').

1.2 EPL is seeking development consent for the construction, operation and maintenance of a new gas-fired electricity generating station with an output capacity of up to 2,500 megawatts ('MW'), including electrical and water connections, a new gas supply pipeline and other associated works (the 'Project' or 'Proposed Development') on land within and to the north of the existing Eggborough coal-fired power station, near Selby, North Yorkshire.

1.3 A DCO is required for the Proposed Development as it falls within the definition and thresholds for a 'Nationally Significant Infrastructure Project' (a 'NSIP') under sections 14 and 15(2) of the PA 2008.

1.4 The DCO, if made by the SoS, would be known as the 'Eggborough CCGT (Generating Station) Order' (the 'Order').

EPL

1.5 EPL owns and operates the existing Eggborough coal-fired power station (the 'coal-fired power station'), near Selby, including a significant proportion of the land required for the Proposed Development.

1.6 EPL was acquired by EP UK Investments Ltd (EP UK) in late 2014; a subsidiary of Energetický A Prumyslový Holding ('EPH'). EPH owns and operates energy generation assets in the Czech Republic, Slovak Republic, Germany, Italy, Hungary, Poland and the United Kingdom.

The Site

1.7 The Proposed Development Site (the 'Site' or the 'Order limits') is located at and within the vicinity of Eggborough coal-fired power station south of Selby. The River Aire is located just to the north of the Site. The A19 road is immediately to the west. Eggborough Village situated to the south-west.

1.8 The entire Site lies within the administrative boundaries of Selby District Council ('SDC') and North Yorkshire County Council ('NYCC').

1.9 The coal-fired power station was officially opened in 1970 and comprises four coal-fired boiler units, which together are capable of generating up to 2,000 MW of electricity. The coal-fired power station also includes a turbine hall and boiler house, an emissions stack (chimney) of approximately 198 metres ('m') in height, eight concrete cooling towers of approximately 113 m in height, an administration and control block, coal stock yards and a dedicated rail line for the delivery of coal, in addition to ancillary buildings, structures and infrastructure and utility connections.

1.10 The Site itself extends to approximately 102.5 hectares and comprises land within the operational area of the existing coal-fired power station for the new generating station and electrical connection, in addition to corridors of land outside this area for the water connections and gas supply pipeline.

1.11 The land required for the generating station and electrical connection is owned by EPL, as well as the majority of the land for water connections. The land required for the gas supply pipeline is not owned by EPL.

1.12 The area surrounding the Site is predominantly flat and for the most part comprises agricultural land interspersed with small settlements and farmsteads. The area is however crossed by transport infrastructure, notably the A19 and railway lines, including the East Coast Mainline, in addition to overhead electricity lines associated with the coal-fired power station and other power stations within the wider area.

The Proposed Development

1.13 The main components of the Proposed Development are summarised below:

- an electricity generating station fuelled by natural gas with an electrical output capacity of up to 2,500 MW located on the main coal stock yard area of the coal-fired power station, comprising:
  - a combined cycle gas turbine ('CCGT') plant, comprising up to three CCGT units, including turbine and heat recovery steam generator buildings, emissions stacks, cooling towers and cooling water treatment plant, administration/control building, ancillary buildings, plant and equipment;
  - a peaking plant and black start plant fuelled by natural gas with a combined electrical output of up to 299 MW, emissions stacks and ancillary buildings, plant and equipment; and
  - other ancillary buildings, enclosures, plant, equipment and infrastructure connections and works;
- electrical connection works, comprising up to 400 kilovolt ('kV') underground cables to the existing National Grid 400 kV substation and works within the substation;
- cooling water connection works, comprising works to the existing cooling water supply and discharge pipelines and intake and outfall structures within the River Aire;
- raw and towns water supply connection works, comprising works to the existing towns water pipelines and ground water boreholes and pipelines;
- an underground gas supply pipeline connecting to the National Transmission System ('NTS') for gas of up to 1,000 millimetres (nominal bore) in diameter and approximately 4.7 km in length running north, under the River Aire, to a connection point with the NTS to the south-west of Burn Village; and
- an 'Above Ground Installation' ('AGI') to the south-west of Burn Village for the connection of the gas supply pipeline to the NTS.

1.14 The Proposed Development also includes a temporary construction laydown area for the accommodation of plant and materials and contractors compounds and facilities during the

construction phase, which would last for approximately three years. This would be provided on land within the operational area of the coal-fired power station, north of the main coal stock yard.

1.15 In addition, land would be set aside adjacent to the new generating station to accommodate any future carbon capture plant, should the deployment of such technology become viable in the future. It is proposed that this 'reserve' land would be provided on the area to be used for temporary construction and laydown area during construction of the Proposed Development.

The Purpose and Structure of this Document

1.16 The purpose of this document is to set out the proposed strategy to mitigate the effects of the Proposed Development on landscape and biodiversity features and to enhance the biodiversity, landscape and green infrastructure (GI) value of the Site to secure compliance with relevant national and local planning policies.

1.17 The Proposed Development has been designed, as far as is practicable, to avoid or reduce effects on landscape and biodiversity features through development design and impact avoidance. Opportunities to secure net gains for landscape and biodiversity as a consequence of the Proposed Development have also been considered. This assessment process and the impact avoidance measures to be implemented are described in Chapters 10: Ecology and Nature Conservation and 16: Landscape and Visual Amenity of Environmental Statement Volume I (Application Document Ref No. 6.2).

1.18 The ecological impact assessment identified no significant effects on important ecological features during construction, operation or decommissioning of the Proposed Development. No mitigation for ecological features is therefore required. However, there remains a need to avoid impacts on protected/ notable species. This is to ensure compliance with relevant legislation, and to compensate for unavoidable losses of habitat, mainly comprising plantation woodland, through habitat creation/ restoration to meet local and national planning policy objectives for no net loss and net gain of biodiversity.

1.19 The Landscape and Visual Impact Assessment concluded that the Proposed Development will result in no significant effects on landscape character, and there will be no loss in function or cohesiveness of existing green infrastructure. As a result, no mitigation measures specifically responding to effects on landscape character are proposed. However, there remains a need to avoid impacts on trees, for appropriate restoration of the landscape along the gas pipeline following construction and for screening of the AGI, as well as enhancements to the landscape character and improvements to the green infrastructure network to meet requirements of local and national planning policy.

1.20 This document outlines the landscape and biodiversity impact avoidance measures that would be implemented prior to and during construction of the Proposed Development, as well as the enhancement, management and monitoring measures to be implemented once the Proposed Development is operational. These measures will be secured through Requirements in Schedule 2 to the draft DCO (Application Document Ref. No. 2.1).

1.21 In order to avoid potential conflicts in approach to impact avoidance and enhancement, this Indicative Strategy identifies the required impact avoidance and enhancement measures for landscape and biodiversity effects together to demonstrate a cohesive Strategy.

1.22 The Indicative Strategy is structured as follows:

- Section 2 summarises relevant legislation and planning policy;
- Section 3 describes the existing landscape and biodiversity features and the impacts of the Proposed Development;
- Section 4 outlines the requirements for impact avoidance, both during advance works and during the construction phase;
- Section 5 describes the proposals for landscape and biodiversity enhancement (Figure 1 shows the areas of the Site to which the different proposals will be applied);
- Section 6 outlines the measures required for the effective management and maintenance of the proposed enhancements; and
- Section 7 describes the roles and responsibilities of all parties involved in the delivery of the final approved Strategy.

2.0 LEGISLATION AND PLANNING POLICY

Legislation

2.1 The following legislation has been considered in the preparation of this Indicative Strategy:

- The Conservation of Habitats and Species Regulations 2010 (as amended);
- Wildlife and Countryside Act (WCA) 1981 (as amended);
- Protection of Badgers Act 1992 (as amended);
- Countryside & Rights of Way Act 2000 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- Eels (England and Wales) Regulations 2009 (as amended);
- Salmon & Freshwater Fisheries Act 1975 (as amended);
- Animal Welfare Act 2006; and
- Hedgerows Regulations 1997.

National Planning Policy

2.2 Relevant national planning policy that has been considered in relation to landscape and biodiversity impact avoidance and enhancement is as follows:

- National Planning Policy Framework (NPPF);
- European Landscape Convention;
- Overarching National Policy Statement (NPS) for Energy (EN-1);
- NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2); and
- NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

National Planning Policy Framework

2.3 Whilst regard has been made to the NPPF policies set out below, Paragraph 3 of the NPPF is clear that it does not contain specific policies for NSIPs and these are to be determined in accordance with the decision-making framework set out in the PA 2008 and relevant NPSs, as well as any other matters that are considered both important and relevant.

2.4 In respect of the natural environment, the NPPF states that "*… the planning system should contribute to and enhance the natural and local environment by:*

- *protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *recognising the wider benefits of ecosystems services; and*
- *minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures …*"

European Landscape Convention

2.5 The United Kingdom ratified the European Landscape Convention in 2006. While it has not been incorporated into UK law its principles are reflected in Government and local planning policies. This includes expectations that local communities are engaged in the setting of priorities and objectives for their local landscapes, and that opportunities be sought to align conservation and landscape objectives for designated areas.

2.6 The NPPF outlines strong protection of designated landscapes and the duty on decision-makers to consider landscape impacts in plan making and planning decisions. The UK Government considers the NPPF compliant with the convention.

Overarching National Policy Statement (NPS) for Energy (EN-1)

2.7 With respect to landscape, EN-1 paragraph 5.10.20 details requirements where green infrastructure is affected. It states that "*the IPC should consider imposing requirements to ensure the connectivity of the green infrastructure network is maintained in the vicinity of the development and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space …*"

2.8 With respect to biodiversity, EN-1 paragraph 5.3.4 requires evidence to show how the Proposed Development "*… has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.*"

2.9 Paragraph 5.3.15 states that "*Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the IPC should maximise such opportunities in and around developments …*"

2.10 EN-1 specifically requires applicants to demonstrate that:

- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;
- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;
- habitats will, where practicable, be restored after construction works have finished; and
- opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscape proposals.

NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2)

2.11 With respect to visual impacts and landscape mitigation, EN-2 paragraph 2.6.5 states that *"It is not possible to eliminate the visual impacts associated with a fossil fuel generating station. Mitigation is therefore to reduce the visual intrusion of the buildings in the landscape and minimise impact on visual amenity as far as reasonably practicable."* The design should provide the best fit with the existing local landscape and to minimise the impact through use of appropriate external finishes and colour choice and to enclose low level buildings and structures to reduce impacts from nearby receptors.

NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

2.12 Section 2.21 of EN-4 sets out the biodiversity, landscape and visual impacts and mitigation in relation to gas and oil pipelines. Paragraph 2.21.2 states that *"Long term impacts upon the landscape for pipelines are likely to be limited, as once operational the main infrastructure is usually buried."*

2.13 Paragraph 2.21.3 states *"Where it is unlikely to be possible to restore landscape to its original state, the applicant should set out measures to avoid, mitigate, or employ other landscape measures to compensate for, any adverse effect on the landscape."*

2.14 Impact avoidance measures to protect the landscape and ecology are recommended in Paragraphs 2.21.5 and 2.21.6 and include:

- reducing the working width required for the installation of the pipeline in order to reduce the impact on the landscape where it will not be possible to fully reinstate the route; and
- the use of horizontal direct drilling to minimise impacts on ancient woodland and important trees and hedgerows.

Local Planning Policy

2.15 The local planning policies that are relevant to the Site are set out in the following documents:

- the 'saved' policies of the Selby District Local Plan – adopted February 2005 (SDC, 2005); and
- the Selby District Core Strategy Local Plan – adopted October 2013 (SDC, 2013).

2.16 Both of these documents contain a number of policies of relevance to the need for landscape and biodiversity mitigation and enhancement for the Proposed Development, as follows:

- SP 18 (Selby Core Strategy) Protecting and Enhancing the Environment;
- SP 19 (Selby Core Strategy) Design Quality;
- ENV 1 (Selby District Local Plan) Control of Development;
- ENV 12 (Selby District Local Plan) River and Stream Corridors;
- ENV 13 (Selby District Local Plan) Development Affecting Ponds;
- ENV 21 Landscaping Requirements; and
- EMP 10 (Selby District Local Plan) Additional Industrial Development at Drax and Eggborough Power Stations.

2.17 Policy SP 18 requires the safeguarding and, where possible, enhancement of the landscape character and natural environment of the area.

2.18 Policy SP 19 requires high quality design that has regard to local character and also the incorporation of new and/ or existing landscaping.

2.19 Policy ENV 1 sets out the considerations required in respect of new development including the impact on the character of the area, standard of layout and design including materials and landscape scheme.

2.20 Policies ENV 12 and ENV 13 set out SDC's approach to assessing development proposals that have the potential to harm the wildlife value of river and stream corridors and ponds.

2.21 Policy ENV 21 provides guidance on the requirements of landscape schemes in relation to development to ensure that the retention, replacement and planting of trees has been appropriately considered.

2.22 Policy EMP 10 states that no additional industrial/ business related development should be permitted at Eggborough Power Station if it results in a significant adverse effect on residential amenity in nearby settlements.

Other Guidance

2.23 The Government, through Section 41 of the NERC Act 2006, has published a list of habitats and species that are of principal importance for the conservation of biodiversity in England.

2.24 The Selby Biodiversity Action Plan (BAP; NYCC, SDC and Selby BAP Partnership, 2004) provides a locally relevant list of habitats and species that are considered priorities for nature conservation. This includes many of the habitats and species listed in Section 41 of the NERC Act as being priorities for conservation at a national (England) level, but goes further and identifies a suite of species that are considered to be regional priorities for nature conservation.

2.25 Priority habitats and species that are relevant to the Site, based on its geographic context and other ecological considerations, are as follows:

- woodland;
- lakes and ponds;
- rivers, streams and ditches;
- otter;
- water vole;
- great crested newt;
- bats; and
- bumblebees.

2.26 The above lists have been considered when defining and specifying requirements for landscape and biodiversity impact avoidance and enhancement.

2.27 In April 2012, Defra published a pilot biodiversity offsetting metric (Defra, 2012) to provide a standardised method for comparing losses and gains in biodiversity through development. A defined methodology is used to calculate the number of 'biodiversity units' that need to be provided by a developer to offset losses. The required compensation may be provided either within the development boundary, or through off-site habitat creation or restoration works. The Defra biodiversity offsetting metric has been used to quantify the losses and gains in biodiversity as a result of the Proposed Development in order to demonstrate that no net loss and net gain can be achieved.

2.28 Published Green Infrastructure Strategies that are relevant to the Site and surrounding area include the Leeds City Region Green Infrastructure Strategy (LDA Design, 2014) and The Countryside in and Around Towns: Yorkshire and Humber Green Infrastructure Strategy (Natural England, 2006). The principals of these strategies, which include the enhancement of landscape

and biodiversity to increase their Green Infrastructure function, have been considered as part of this document.

3.0 EXISTING LANDSCAPE AND BIODIVERSITY FEATURES AND DEVELOPMENT IMPACTS

Existing Landscape and Associated Habitats

3.1 Vegetation within the existing coal-fired power station is largely limited to screening plantation woodland on bunds around the main coal stockyard and the emergency coal stockyard in the south and east of the Proposed Power Plant Site and Proposed Construction Laydown area. There are also areas of tree planting along Wand Lane to the north of the Proposed Power Plant Site and Proposed Construction Laydown area, along Tranmore Lane, and along the railway line in the south-west of the Site. Generally the tree stock is in moderate condition, with an estimated life expectancy of approximately 50 to 75 years. Much of the coniferous screening adjacent to the Site boundary is within the semi-mature range. Management appears to be minimal and as a result the groups have developed into a coherent visual canopy, though some sparse areas are evident. The woodland blocks generally lack an established understorey and ground flora. The existing diversity of tree species is relatively poor and includes several non-native species.

3.2 The original planting scheme for the existing coal-fired power station site was designed by Brenda Colvin in the 1960's, although the original planting has been considerably modified and changed over the years.

3.3 Other habitats within the existing coal-fired power station site include a large lagoon within the Proposed Construction Laydown area, screened by plantation coniferous woodland, and areas of species-poor grassland on verges, embankments and screening bunds.

3.4 The Proposed Cooling Water Connections and Proposed Gas Connection routes pass through an intensively managed arable landscape to the north of the existing coal-fired power station. Vegetation is limited to small areas of trees, scrub and hedgerows associated with field boundaries. This is in part due to EPL designing the route of the Proposed Gas Connection so as to avoid areas of vegetation – in-built mitigation through design. These proposed pipeline routes also cross a main drainage channel to the north of the existing coal-fired power station (Ings and Tethering Drain), several minor drainage ditches along field boundaries (most only wet for part of the year) and the River Aire. The banks of the River Aire and Ings and Tethering Drain support tall ruderal vegetation (including abundant Himalayan balsam, a controlled weed species), scattered scrub and species poor grassland.

3.5 The Proposed Power Plant Site is bound to the north-west by the Eggborough Sports and Leisure Complex and the A19; to the north, east and south by agricultural fields, the cooling towers and turbine hall of the existing power station site, Wand Lane and Hazel Old Lane; and to the south-west by agricultural land, beyond which lies the Saint Gobain glass and Celotex factory.

Existing Biodiversity Features

3.6 Badgers are present in the landscape around the Proposed Development and the potential for adverse or beneficial effects will need to be considered when implementing the Strategy. Patterns of badger activity have potential to change over time, so the relevance of badger will need to be considered in the lead-in to implementation of the final approved Strategy.

3.7 Bats use habitats around the existing coal-fired power station site for foraging. In particular, high levels of foraging activity, mainly by common pipistrelle bats, were found in association with the

lagoon in the Proposed Construction Laydown area. No suitable bat roosting habitat was identified within those parts of the Site to be affected by the Proposed Development.

3.8 Great crested newt presence was confirmed within a pond adjacent to the Selby Canal, 300 m to the north-west of the Proposed AGI. However, there is no suitable connecting habitat between the pond and the AGI as the intervening area comprises intensively managed arable land. On this basis, great crested newt is unlikely to be present in works areas but precautionary measures are advised in Section 4 of this Indicative Strategy to account for the low risk of impacts during construction works.

3.9 Signs of otter activity were found along Ings and Tetherings Drain, and otters are also likely to use the River Aire. The bankside habitats within and adjacent to the Site are sub-optimal for otter refuge as they lack suitable cover; as a result otter presence within the Site is likely to be infrequent and transitory.

3.10 Grass snakes are expected to be widespread in farmland south of Selby and there is potential for transitory use of habitats such as ditch and river banks along the routes of the Proposed Gas Connection and the Proposed Cooling Water Connections.

3.11 The River Aire at the existing cooling water abstraction and discharge points was found to support a range of common coarse fish in low densities, including roach, perch, gudgeon, pike, three-spined stickleback, tench and bullhead. Two marine fish species, dace and flounder, were also found at the discharge point, which is within the tidal reach of the river. Notable species such as European eel, Atlantic salmon and river and sea lamprey were not detected during surveys, but may be present based on historical fish catch data and anecdotal sightings.

3.12 The lagoon within the Proposed Construction Laydown area is stocked with coarse fish including rudd, tench, perch, crucian carp and common carp.

3.13 Suitable habitat for nesting birds is present throughout the Site, including plantation woodland, scrub and hedgerows. No suitable breeding habitat for birds listed on Schedule 1 Part 1 of the WCA 1981 was identified.

3.14 The Proposed Gas Connection route crosses two species poor field boundary hedgerows. Removal of part of these hedgerows will be necessary during construction of the pipeline.

3.15 Three invasive non-native plant species listed on Schedule 9 of the WCA 1981 were identified within the Site. Himalayan balsam is present on the banks of the River Aire and drainage ditches, within areas of plantation woodland and in areas of bare ground. Giant hogweed was identified along the banks of the River Aire. Nuttall's waterweed is abundant within Ings and Tetherings Drain.

Impacts on Landscape and Biodiversity Features

3.16 The Proposed Development will result in the permanent loss of approximately 4 ha of plantation woodland within the existing coal-fired power station. Areas to be lost are internal and the existing screening woodlands on bunds around the site will be retained. Other habitats to be permanently lost within the existing coal-fired power station include the lagoon and surrounding conifer trees, approximately 1 ha of species-poor grassland and small areas of scrub.

3.17 The Proposed Gas Connection, Proposed Cooling Water Connections and Proposed Surface Water Connection will result in temporary impacts on habitats during construction, including arable land and bankside and in-channel habitats within Ings and Tetherings Drain, Hensall Dyke and the River Aire. These habitats will quickly regenerate following construction. Small numbers of trees and two sections of species poor hedgerow will also need to be removed and these will be replaced following construction. The AGI will result in the permanent loss of approximately 0.8 ha of arable land, half of which will be used to screen the AGI infrastructure.

3.18 There is the potential for adverse impacts on a number of protected or notable species during construction and operation, including foraging bats, badger, breeding birds, grass snake, otter, water vole, great crested newt and fish. Construction works also have the potential to cause the spread of several invasive, non-native plant species.

4.0 IMPACT AVOIDANCE REQUIREMENTS

Overview

4.1 The impact avoidance measures outlined below will be implemented, as relevant and appropriate, prior to and during the construction phase of each relevant part of the Proposed Development, the purpose being to minimise the impact of works on biodiversity features and trees and to achieve legislative compliance.

4.2 The Landscape and Visual Impact Assessment concluded that the Proposed Development will result in no significant effects on landscape character. There is also no loss in function or cohesiveness of existing green infrastructure, including the screening plantations around the boundary of the existing coal-fired power station. Given this, no mitigation measures specifically responding to effects on landscape character are proposed. However, impact avoidance measures to demonstrate engagement with local planning policy (relating to tree retention and replacement) and the requirements of the NPS (restoration of landscape after construction of the Proposed Gas Connection, and screening of the AGI) are included.

4.3 The Ecological Impact Assessment concluded that the Proposed Development will result in no significant effects on biodiversity features. However, it is necessary to avoid or minimise impacts on protected/ notable species to comply with legislation and planning policy.

4.4 Due to the limited available space on site for habitat creation, like-for-like replacement for tree loss cannot be achieved. Therefore, the impact avoidance approach also allows for enhancement of the retained woodland plantations within the existing coal-fired power station to deliver improved quality of screening, improved habitat structure and quality, and greater certainty of continuity of tree cover and screening. This will ensure that the connectivity of the existing green infrastructure network is not only maintained but is also enhanced. Enhancement proposals are included in Section 5 of this report.

Update Surveys

4.5 An ecologist will complete a Site walkover in advance of mobilisation and any potential advance works to reconfirm the ecological baseline conditions and to identify any new ecological risks. The walkover will be completed sufficiently far in advance of the works to allow for the completion of any additional, seasonally constrained surveys (*e.g.* surveys in support of any identified requirements for protected species licences) that may be required.

4.6 Immediately prior to site clearance and start of construction of each relevant part of the Proposed Development, further Site walkover surveys will be undertaken by an ecologist and landscape architect or arboriculturalist to confirm that the risks associated with the Site remain as previously assessed and/ or to confirm the correct impact avoidance measures are being implemented (*e.g.* tree protection fencing, protected species stand-offs and other protection measures). The scope of the required walkovers will be defined on a case by case basis in consultation with the project team and SDC, based on the specific risks associated with each relevant part of the Proposed Development and informed by the preceding ecological walkover described above. See also Precautionary Working Methods, which provides more detail on likely requirements for ecological surveys and inspections. Pre-construction surveys will be undertaken in accordance with a draft DCO Requirement (see Application Document Ref. No. 2.1).

4.7 Existing or potential landscape and biodiversity constraints to be re-assessed and/ or monitored during update surveys are:

- badgers;
- riparian mammals;
- suitability of trees for roosting bats;
- nesting birds;
- invasive non-native plant species; and
- trees.

4.8 Should any new constraints be identified then the Landscape and Biodiversity Strategy would be updated, and any additional impact avoidance or mitigation requirements identified in consultation with SDC.

4.9 Any additional walkover surveys or requirements for site supervision will be instructed over the advance works, site clearance and construction phases as advised as necessary by the ecologist or landscape architect based on professional judgement and the findings of the update surveys, or otherwise as identified as appropriate by EPL or their appointed main contractor based on changes to programme, working requirements or following identification of specific issues and constraints not covered by previous advice.

Protected Species Licences

4.10 All necessary protected species licences would be applied for and obtained prior to undertaking any works that might result in offences under relevant legislation.

4.11 With reference to the defined baseline conditions, the only potential requirement for a licence relates to badger because this species is known to be present in the surrounding landscape (see Appendix 10D of ES Volume III). Whether or not a licence is required will depend on the distribution and status of active badger setts at the time of commencement of the Proposed Development, which will be determined during pre-construction update surveys. Requirements for badger licences are primarily an animal welfare requirement and not because the species is threatened or of specific nature conservation importance. Given this, the licensing body (Natural England) is reasonably expected to grant a badger licence subject to agreement of the required mitigation.

Clerk of Works and Toolbox Talks

4.12 Requirements for Clerk of Works (CoW) and toolbox talks will be advised by the ecologist and landscape architect based on relevant environmental commitments, the findings of the update surveys and with reference to the relevant project programmes.

4.13 Relevant site staff will receive toolbox talks on the relevant ecological risks present, legal requirements, and the working requirements necessary to comply with legislation and the final approved Landscape and Biodiversity Strategy. Toolbox talks will be repeated as necessary over the duration of the relevant works.

Tree Works

4.14 The majority of established trees and woodland blocks around the existing coal-fired power station will be unaffected by the Proposed Development. Full details of necessary tree removals are contained within the Arboricultural Report (Appendix 1).

4.15 Where trees have been identified as requiring removal due to poor physiological and/or structural condition, consideration will be given to monolithing (cutting back the canopy and branches without felling) where appropriate in order to leave standing dead wood of benefit to biodiversity such as bats, birds and invertebrates.

4.16 Where works in close proximity to retained trees cannot be practicably avoided then these works would be undertaken in accordance with current best practice. At the time of issue of this Indicative Strategy, current best practice is defined in:

- British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations; and
- National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

4.17 All necessary protective fencing will be installed prior to the commencement of any site clearance or construction works, as set out in the Arboricultural Report (Appendix 1) and to be detailed as part of the Arboricultural Method Statement.

Impact Avoidance Measures for Hedgerow and Tree Loss

Hedgerows

4.18 Two species poor hedgerows will be crossed by the Proposed Gas Connection and may need to be wholly or partially removed to facilitate construction works. Up to 80 m of hedgerow may be affected by the proposed works.

4.19 On completion of construction, the affected hedgerow sections will be re-instated in full and a diversity of native woody species of local provenance will be used to improve their biodiversity value. Species will include hawthorn, blackthorn, hazel, holly and field maple.

4.20 All hedgerow planting will be notch planted into cultivated ground at 75 cm spacings in a double staggered row, and supported by an appropriate timber stake and guard (all fitted as per manufacturer's recommendations).

Trees

4.21 Trees located along the Proposed Gas Connection corridor that cannot be retained will be replaced with native species (either the same as the tree that has been removed or another suitable native species).

4.22 All new trees will be notch planted at 2 m centres with a random distribution into cultivated ground. All planting will also be supported by an appropriate timber stake and tree shelter and will be fitted as per manufacturer's recommendations.

Screening of AGI to Reduce Visual Impact

4.23 Tree and scrub planting will be undertaken around the AGI compounds. This will seek to integrate the AGI compounds into the surrounding landscape whilst providing a screening function of the facility and boundary fencing. The proposed species composition will consist of a range of native tree and shrub species based upon the species prevalent locally and also contain a number of evergreen native species to provide a year round level of screening.

Built Structures

4.24 The following impact avoidance measures in relation to built structures were highlighted as part of the Landscape and Visual Impact Assessment and will be taken into consideration as part of the detail design of the Proposed Development, secured by a Requirement of the draft DCO (Application Document Ref. No. 2.1):

- suitable materials will be used, where possible, in the construction of structures to reduce reflection and glare and to assist with breaking up the massing of the buildings and structures;
- the selection of finishes for the buildings and other infrastructure, including means of enclosure, will be informed by the finishes of the adjacent developments and will be developed in consultation with Selby DC in order to minimise the visual impact of the Proposed Development; and
- visual clutter will be minimised where possible through careful design.

Precautionary Working Methods

4.25 The following precautionary working methods will be employed to minimise potential adverse impacts on protected species prior to and during construction. Precautionary working method statements will be produced as necessary to specify working requirements and other necessary impact avoidance measures. These measures will be controlled and implemented through the Construction Environmental Management Plan (CEMP) that will be developed by the main construction contractor for the Proposed Development., secured by a Requirement of the draft DCO (Application Document Ref. No. 2.1).

Nesting Birds

4.26 Where practicable, vegetation clearance works will be undertaken outside the bird nesting season, which is generally between March and August inclusive. Where it is not practicable to avoid the bird nesting season, an ecologist would inspect all areas of vegetation prior to clearance and clearance would only be undertaken subject to the instruction and requirements of the ecologist to ensure the protection of birds and their nests. Cleared ground would be maintained in a disturbed state in the run-up to construction, to minimise the risk of ground nesting birds attempting to nest on cleared ground.

Grass Snake

4.27 Precautionary working methods to avoid accidental killing or injury of grass snakes will be implemented during construction of the Proposed Gas Connection and Proposed Cooling Water Connections. Precautionary methods will include initial clearance of potentially suitable vegetation down to a height of approximately 30 cm, followed by dismantling of any suitable

features, such as log piles and tree stumps, under ecological supervision. Vegetation will be cleared to ground level once no risk of grass snake presence remains. Vegetation within working areas will be kept short during construction to discourage grass snakes from entering the Site.

Great Crested Newt

4.28 Precautionary working methods will be employed during works associated with construction of the AGI to address the low residual risk of great crested newt injury or disturbance. Measures will include a pre-construction walkover by an ecologist prior to commencement of vegetation clearance and tool box talks for construction personnel.

Fish

4.29 The installation and removal of coffer dams for construction works at the cooling water abstraction and discharge points on the River Aire will be avoided during the main salmonid migration period between October and December inclusive. This will minimise potential impacts on the migration of salmonids up the River Aire, as well as other fish species such as river and sea lamprey, especially now that a fish pass has been installed on the weir at Chapel Haddlesey.

Animal Welfare Requirements

4.30 Construction excavations have the potential to trap wildlife, such as badger and otter, and result in offences under animal welfare legislation. This will be avoided through implementation of simple precautionary mitigation. All excavations deeper than 1 m will be covered overnight, or where this is not practicable a means of escape will be fitted *e.g.* battered soil slope or scaffold plank, to provide an escape route should any animals stray into the construction site and fall into an excavation.

4.31 A Fish Management Plan will be prepared and define the measures necessary to deliver compliance with relevant legislation during the draining of the lagoon within the Proposed Construction Laydown area. The Fish Management Plan will also identify fish welfare measures to be implemented during any necessary de-watering operations associated with construction works at the cooling water abstraction and discharge points on the River Aire.

4.32 Eel screens will be installed at the cooling water abstraction point (and, if necessary, discharge point) under the Eels (England and Wales) Regulations 2009 (as amended), to prevent the entrainment of eels and other fish into the cooling water system during operation.

4.33 Measures will be put in place at any construction compounds located adjacent to Ings and Tethering Drain to minimise the risk of disturbance and obstruction of otter movements along the drain at night. This will include measures, as relevant, to minimise light spill onto the drain and to minimise noise from plant and construction activities.

Invasive Species Management Plan

4.34 An Invasive Species Management Plan (ISMP) will be prepared as necessary based on the findings of the update surveys. The ISMP will identify requirements for invasive plant management to achieve legislative compliance over the construction phase. It is anticipated that the construction phase requirements will be included as part of an ISMP covering advance works and site clearance also. There may be ongoing requirements to control invasive plant species during establishment

of new habitats and soft landscape, or otherwise to address wider requirements for legislative compliance.

4.35 If necessary, the ISMP will be updated to allow it to be rolled forward into the operational phase of the Proposed Development.

5.0 LANDSCAPE AND BIODIVERSITY ENHANCEMENT

Approach

5.1 The existing coal-fired power station already benefits from mature boundary woodland plantations. These provide an important screening function and reduce the visual impacts of the Proposed Development, particularly given the coal stockyard site that was selected for the Proposed Development as outlined in Chapter 6: Need, Alternatives and Design Evolution (ES Volume I, Application Document Ref. No. 6.2). These woodland plantations will be retained and enhanced for purposes of screening and biodiversity benefit. The requirement to maintain the existing level of screening has been a key consideration in the development of this Indicative Landscape and Biodiversity Strategy. Woodland management operations that would compromise the essential screening function have been discounted (*e.g.* removal of non-native trees, substantial tree thinning and creation of woodland clearings for biodiversity benefit). Where habitat management is feasible without compromising screening and where it has potential to deliver meaningful enhancement for biodiversity then this has been included in the Indicative Strategy.

5.2 Proposals for new habitat creation and landscaping are accommodated, where feasible, within the existing power station site but the main focus is on protection and enhancement of existing habitats.

5.3 The landscape and biodiversity effects of the Proposed Gas Connection and Proposed Cooling Water Connections to the north of the Site are considered to be limited. While there will be a short term impact during construction, the land and associated field boundary features (hedgerows, drainage ditches, trees) will be reinstated following construction. Only the AGI and periodic above ground route markers will remain visible post-construction. The majority of land along the Proposed Gas Connection and Proposed Cooling Water Connections is not owned by EPL and existing land uses (other than the AGI) will be in place again following construction. Opportunities for meaningful landscape and biodiversity enhancement along these routes are therefore limited by these factors. Enhancements along the gas and water connection routes have been identified where appropriate, but the main focus of enhancements is on the existing coal-fired power station.

5.4 Biodiversity offsetting metrics have been used to quantify the biodiversity value of the proposed enhancement measures and to compare these to the biodiversity value of proposed losses to demonstrate that the Proposed Development can achieve no net loss and net gain of biodiversity.

Features to be Created, Enhanced and Managed

5.5 Landscape and biodiversity enhancement proposals are outlined in Table 5.1. The areas of the Site to which they apply are shown on Figure 1. Further details of the proposed enhancements are provided below the table.

Table 5.1: Landscape and Biodiversity Enhancement Proposals

Enhancement	Key elements	Landscape function	Biodiversity function
Existing woodland management	Infill tree planting	✓	✓
	Understorey scrub planting	✓	✓
	Ground flora planting		✓
	Dead wood habitat piles		✓
	Provision of wildlife boxes		✓
Species-rich grassland	Botanical enhancement of existing areas of species-poor grassland		✓
New surface water attenuation pond	Design and planting for biodiversity benefit	✓	✓
Hedgerows	Replacement planting and diversification	✓	✓
AGI planting	Screening planting around the AGI	✓	✓
CCR planting	Seeding areas of land set aside for CCR with grassland and wildflowers		✓

Existing Woodland Management

Infill Tree Planting

5.6 The existing areas of woodland are in good condition and the component trees currently present are predicted to have an average remaining life span of 60 to 75 years. However, where trees in poor structural or physiological condition have been identified (see Arboricultural Report in Appendix 1), replacement planting will be undertaken to pre-empt gaps occurring and thus provide continued canopy cover and screening benefit.

5.7 Investigations will be carried out if certain areas of trees are in poor condition to determine the reasons for this and whether soil remediation is necessary, or a more suitable species selection is required.

5.8 Infill tree planting will be undertaken where there are existing suitable gaps in the plantation woodland, and where trees subsequently fail and gaps are created. The requirement for infill planting will be reviewed on a biannual basis. Soil samples will be taken to establish preferred species selection for areas where plantings are planned. If soils are identified that are considered to be in poor condition, soil remediation measures will be employed.

5.9 The proposed species composition will consist of a range of native tree species based upon the species prevalent locally, as follows:

- alder (*Alnus glutinosa*);
- downy birch (*Betula pubescens*);
- field maple (*Acer campestre*);
- hazel (*Corylus avellana*);
- pedunculate oak (*Quercus robur*);
- Scots pine (*Pinus sylvestris*);

- sessile oak (*Quercus petraea*);
- silver birch (*Betula pendula*); and
- yew (*Taxus baccata*).

5.10 All new trees will be notch planted at 2 m centres with a random distribution into cultivated ground. All planting will also be supported by an appropriate timber stake and tree shelter and will be fitted as per manufacturer's recommendations.

Understorey Scrub Planting

5.11 Scrub planting will form a significant part of the enhancement of the habitat mosaic associated with the woodland areas surrounding the parts of the Site within the existing coal-fired power station. The proposed scrub is intended to promote establishment of a new vegetated understorey within the woodlands, improving habitat cover for local wildlife and providing a more complex habitat transition between the woodlands and adjacent habitats. The scrub areas will be planted at a range of densities to maximise edge habitat and to provide a range of aspects and niches (*e.g.* areas of dense and scattered scrub).

5.12 The proposed planting will be undertaken within the existing woodland plantation where light and space allows and concentrated towards the edges (subsequent natural regeneration will allow further colonisation of the wider woodland area). The shrub mix will comprise species typical of nearby semi-natural habitats, as well as other species present more locally but that from evergreen screening. This will include:

- blackthorn (*Prunus spinosa*);
- field maple (*Acer campestre*);
- hawthorn (*Crataegus monogyna*);
- hazel (*Corylus avellana*);
- holly (*Ilex aquifolium*); and
- yew (*Taxus baccata*).

5.13 All scrub planting is to be notch planted into cultivated ground at 1.5 m and 2.5 m spacings and supported by an appropriate timber stake and shrub shelter (all fitted as per manufacturer's recommendations).

Ground Flora Planting

5.14 Opportunities for plug planting of woodland ground flora will be identified within existing areas of screening woodland to provide increased cover and diversity of vegetation. The most appropriate locations are likely to be along woodland edge where more light penetrates through to the ground and an appropriate woodland edge plant mix will be used. Plantings will then be able to spread naturally throughout woodland areas where conditions are suitable. Plug planting within internal areas of woodland is unlikely to be successful given the existing closed canopy, which needs to be maintained for screening purposes. Thinning areas of woodland to create glades will not generally be possible due to requirements for screening, but scalloping of woodland edges may be possible to increase woodland edge habitats and provide suitable conditions for the introduction of ground flora, where this does not impact on the screening function of the woodland.

5.15 Appropriate fencing will be erected around areas of new ground flora planting to prevent damage by rabbits and deer.

5.16 Dead wood habitat piles will be also be provided within retained woodland areas to benefit invertebrates, and in turn wildlife such as birds and bats. Wood will be available from trees felled due to poor physiological and/or structural condition within retained woodlands, as well as from areas of plantation removed to facilitate the Proposed Development.

Provision of Wildlife Boxes

5.17 The suitability of existing woodlands within the Site for nesting birds is currently limited by their even age structure and the general lack of a shrub layer. There is a lack of opportunities for species that nest in tree cavities or in the shrub layer. The age of the trees and the species present also provides few opportunities for roosting bats within cavities or other suitable features.

5.18 A range of artificial bird and bat boxes will be installed in existing woodland areas to increase the availability of nesting and roosting features and enhance the value of the woodlands for these species groups.

5.19 A total of 20 No. bird nest boxes and 10 No. bat roost boxes of varying types to suit different species of birds and bats will be installed within the retained woodland areas on suitable trees, in locations to be determined by an ecologist at the time of installation.

Species Rich Grassland

5.20 Species rich grassland habitat will be established on and adjacent to the bund around the Proposed Power Plant Site.

5.21 The internal face of the bund currently supports species poor grassland, with frequent areas of scrub, covering a total area of approximately 1.1 ha. Another area of species poor grassland is present in the south-east corner of the Site, outside the bund, covering an area of approximately 0.2 ha. These grassland areas will be managed to increase the diversity of native grass and herbaceous plant species, using targeted sowing and plug planting as necessary. A locally appropriate wildflower seed / plant mix will be used, taking into account factors such as the aspect and the intended future management of grassland areas.

5.22 Natural England guidance on the botanical enhancement of species poor grasslands (Natural England, 2010) indicates that the areas of existing species poor grassland within the Site have moderate potential for botanical enhancement. The botanical enhancement of species poor grassland areas will benefit local priority species such as bumblebees and other invertebrates, and in turn other wildlife such as bats and birds.

New Surface Water Attenuation Pond in Proposed Construction Laydown Area

5.23 A new surface water attenuation pond will be constructed in the Proposed Construction Laydown area to store surface water run-off from this part of the Site. This will be designed to hold at least some permanent water all year round and will be planted for the benefit of biodiversity.

5.24 The margins of the pond will be planted with suitable native marshy and aquatic plant species. Surrounding areas will be planted with species-rich grassland, scrub and trees to create sheltered

conditions around the pond and provide visual screening. Aggressively spreading species such as bulrush will not be planted to prevent any reduction in the flood attenuation capacity of the pond. No fish will be stocked within the pond.

5.25 The management of the new surface water attenuation pond for the benefit of biodiversity will provide some compensation for the loss of aquatic habitat associated with the lagoon within the existing coal-fired power station.

AGI Planting

5.26 Tree and shrub planting would be undertaken to mitigate the visual impact of the AGI, and is described in Section 4.0. These new plantings will provide pockets of new woody habitat of value to wildlife. This will include potential value as cover and foraging habitats for birds, bats, brown hare and badger.

CCR Planting

5.27 Areas of land set aside for Carbon Capture Readiness (CCR) that do not already comprise hardstanding will be seeded with wildflower grassland on completion of the construction phase. These areas will provide temporary benefits for wildlife, such as pollinating insects, and can be easily removed to accommodate carbon capture infrastructure if necessary. The areas that will be available for planting are not known at this stage and will be defined at detailed design. An all-purpose wildflower mix such as Emorsgate Seeds EM2 (Standard General Purpose Meadow Mix), or similar, with a grass to wildflower species ratio of 80:20 will be sown at a rate of 40 kg per hectare.

5.28 Government guidance states that land set aside for CCR cannot be used to compensate for loss of habitats to power station developments, as its purpose is as a site for future carbon capture equipment and therefore it would not be available for long term mitigation or impact avoidance. Therefore, the proposed CCR wildflower grassland planting will be additional to the proposed enhancement measures detailed above that are designed to offset the adverse effects of the Proposed Development in the long term. Accordingly, the CCR planting has not been included within the biodiversity offsetting calculations.

Habitat Creation Principles Supporting Delivery of Biodiversity Enhancement

5.29 Where new native habitats are to be created or new native planting undertaken then the following principles will apply:

- all seed mixes and planting stock will be ordered as early as possible to ensure that supply can be met without risk of substitution;
- all seed mixes and tree and shrub stock will be sourced from a specialist producer of British native plants and who can source-identify all stock (*i.e.* not a non-specialist nursery that buys in stock or an agricultural/ general merchant that buys stock from diverse sources, including non-British sources);
- native trees and shrubs will be sourced from a supplier which follows the Forestry Commission's Voluntary Identification Scheme for British Native Trees and Shrubs;

- grassland wildflower mixtures will be approved by the Department for Environment, Food and Rural Affairs (Defra) under the Seed (Registration, Licensing and Enforcement) (England) Regulations 2002; and
- terms of supply will include a condition that no part of the order shall be substituted with stock of alternative species or origin and that any change must be mutually agreed.

5.30 The above requirements will be incorporated into contractor specifications and contracts as appropriate to deliver genuinely native plantings in accordance with the biodiversity objectives of this Indicative Strategy.

5.31 Tree protection will either be through the use of a standard tree or shrub shelter (750 mm tall by 150 mm) or through the erection of appropriate post and wire fencing with additional rabbit proof netting, dependent upon the final size and shape of the tree planting.

Biodiversity Offsetting

5.32 The results of the biodiversity offsetting calculation for the Proposed Development is summarised in Table 5.2. The full calculations and the rationale behind them, including assigning habitat type, distinctiveness and condition, is included in Appendix 2.

5.33 In quantifying the loss of biodiversity as a result of the Proposed Development, only those habitats to be permanently removed, such as areas of plantation woodland and the lagoon within the existing coal-fired power station, were included in the calculation. Habitats that will be replaced following construction on at least a like-for-like basis, such as hedgerows and trees, or will naturally regenerate, such as ditch and riverbank habitats, were not included in the calculations, because the long term effect is considered to be neutral. Protected species are not included within the Defra offsetting metric because there is an existing legal process for protecting such species.

5.34 To quantify the biodiversity gain that can be achieved by the proposed enhancements, where existing habitats will be enhanced, the biodiversity value of the existing habitat is subtracted from the biodiversity value of the target habitat. Multipliers are also applied to take account of the risks associated with restoring or creating habitats, including the likely timeframe to target condition, the difficulty of restoration or creation, and spatial risks relating to the suitability of the proposed location of offsets.

5.35 Proposed enhancements relating to the diversification of replacement hedgerows and wildflower planting on CCR land have not been included in the calculations of biodiversity gain. Hedgerows are dealt with separately in the Defra offsetting metric; it is considered that their biodiversity value cannot be quantified in the same way as other habitats and like-for-like replacement is recommended. As a biodiversity value cannot be applied to hedgerows, the proposed diversification of replacement hedgerows cannot be recognised in the calculations. As noted previously, the proposed CCR planting has not been included in the calculations because the area of land available for planting is not yet known. This area of habitat can therefore only be considered to be a temporary measure and cannot be used for long term enhancement.

Table 5.2: Summary of Biodiversity Offsetting Calculations

Habitat	Area (ha)	Biodiversity Units
Habitats to be permanently lost:		
Plantation coniferous woodland	0.75	3
Species poor grassland	1	2
Standing water (lagoon)	1.25	5
Plantation broad leaved woodland	3.1	24.8
Scrub	0.35	1.4
Arable (AGI)	0.4	0.8
Total	**6.85**	**37**
Habitat Creation and Enhancement proposals:		
Existing woodland management	11	25.88
Species rich grassland	1.4	9.33
New attenuation pond	0.3	3.00
AGI planting	0.4	2.00
Total	**12.8**	**40.22**
Net Change in Biodiversity Units		**+3.22**

5.36 The biodiversity offsetting metrics demonstrate that with the implementation of the proposed enhancement measures, the Proposed Development can achieve a small net gain in biodiversity of +3.22 biodiversity units.

6.0 MANAGEMENT AND MAINTENANCE OF LANDSCAPE AND BIODIVERSITY

New Tree and Scrub Planting

6.1 All new landscape plantings will be subject to the draft maintenance regimes described in Appendix 3. During the first five years after planting, all plants found to be dead or dying will be replaced within the first available planting season.

6.2 If areas of trees are seen to be failing, soil samples may be needed to identify potential soil issues affecting tree health. Either soil remediation will be required or, if not practical, a more suitable tree species or location will be chosen with a view to continuing the existing landscape features.

6.3 Areas of tree and shrub planting will be inspected every five years throughout the operational phase of the Proposed Development and a scheme of replacement planting will be implemented as and when required to replace failing or failed specimens.

Species Rich Grassland

6.4 An appropriate management regime for areas of existing grassland to be enhanced will be defined at a later date, but an indicative management regime is likely to include:

- taking a first cut to 5 cm height from late July to mid-August after plants have set seed;
- taking a second cut, as per the first cut, towards the end of October;
- if the grass regrows vigorously, taking a third cut in February to ensure that the sward is approximately 5 cm high;
- approximately one third of the grassland areas will be left uncut and managed as tussocky grassland to retain some habitat structure and refuge for local wildlife when the remainder of grassland is cut;
- all arisings will be removed and a proportion will be used to create habitat piles for the benefit of species such as grass snake;
- scrub encroachment will be controlled within areas of species-rich grassland and will be maintained at no greater than 10% total cover; and

6.5 Parts of the existing grassland on the bund are subject to heavy grazing by rabbits. Measures to prevent or reduce grazing by rabbits, such as installation of fencing, may be required during the early development of species rich grassland in order to allow it to establish properly.

6.6 Initial management of new areas of species rich grassland, such as around the surface water attenuation pond in the Proposed Construction Laydown area, will be in accordance with the recommendations of the seed supplier. Following successful establishment, management regimes are likely to be comparable to those outlined above for existing grassland.

New Surface Water Attenuation Pond Within Proposed Construction Laydown Area

6.7 An appropriate management regime for the new surface water attenuation pond will be defined at a later stage when detailed design is available.

6.8 Management and maintenance of species-rich grassland, scrub and trees around the pond will be undertaken as described above.

Wildlife Boxes

6.9 Bird and bat boxes made from long lasting materials (such as Woodcrete) will be used and would be expected to have a life expectancy of 20-25 years. However, the condition of all wildlife boxes installed would be monitored every five years during the operation of the Proposed Development and replacements will be made as necessary. Inspections can be timed to coincide with the required inspections of new tree and shrub plantings (paragraph 6.3).

6.10 Bat boxes will be inspected by an appropriately licensed bat surveyor for evidence of uptake, and any evidence of roosting bats will be recorded to assist with ongoing management of the woodland on site.

7.0 ROLES AND RESPONSIBILITIES

7.1 EPL and/ or the appointed main contractor will be responsible for:

- correct instruction of all parties contributing to delivery of the final approved Landscape and Biodiversity Strategy (including but not restricted to EPL staff, ecologists, landscape architects, landscape contractors, construction contractors and management organisations);
- compliance with the final approved Landscape and Biodiversity Strategy, relevant legislation and any related planning commitments;
- keeping the appointed ecologist/ landscape architect/ arboriculturalist informed of work activities that require support and supervision, so that it is clear when attendance at site is required;
- enacting/ enforcing recommendations made by the ecologist/ landscape architect/ arboriculturalist, or otherwise agreeing an appropriate alternative course of action if it is subsequently determined that previous advice is not practicable or is out of date; and
- keeping a record of measures taken to deliver the requirements of the final Landscape and Biodiversity Strategy to provide an auditable record of compliance.

7.2 The appointed ecologist will be responsible for:

- advising EPL on ecological matters and requirements for compliance with relevant legislation, providing support as instructed, and monitoring compliance with the final approved Landscape and Biodiversity Strategy; and
- providing EPL with survey reports and other written evidence required by the applicant in accordance with the agreed scope of work and contractual obligations.

7.3 The appointed landscape architect/ arboriculturalist will be responsible for:

- providing specialist site supervision in the form of walk over assessments relating to relevant landscape areas. This will be to assess landscape components and their condition and identify the need for landscape enhancement as instructed and in accordance with the agreed scope of work and contractual obligations, once the proposed scheme has been completed;
- monitoring and assessing the landscape related elements of the approved Strategy for their effectiveness on an annual basis for the first five years following the completion of the development;
- ensuring that the landscape related elements of the approved Strategy are reviewed every 5 years beyond the initial monitoring and assessment stage. The Strategy shall be amended accordingly to suit any changing landscape conditions and ultimately inform the maintenance operations associated with the development throughout the operational life of the Proposed Development;
- ensuring that any reviews associated with landscape related elements of the approved Strategy clearly identifies any changes to site conditions and circumstances, whether the aims and objectives of the approved Strategy are being met, and where identified changes are needed to existing management practices and timeframes.

8.0 REFERENCES

Defra (2012) *Biodiversity Offsetting Pilots – Technical Paper: the metric for the biodiversity offsetting pilot in England*. Defra, London

Natural England (2006) *The Countryside in and Around Towns: Yorkshire and Humber Green Infrastructure Strategy.* Natural England, Peterborough

Natural England (2010) *Higher Level Stewardship Farm Environment Plan (FEP) Manual: Technical guidance on the completion of FEP and the identification, conditions assessment and recording of HLS FEP features - Third Edition*. Natural England, Peterborough

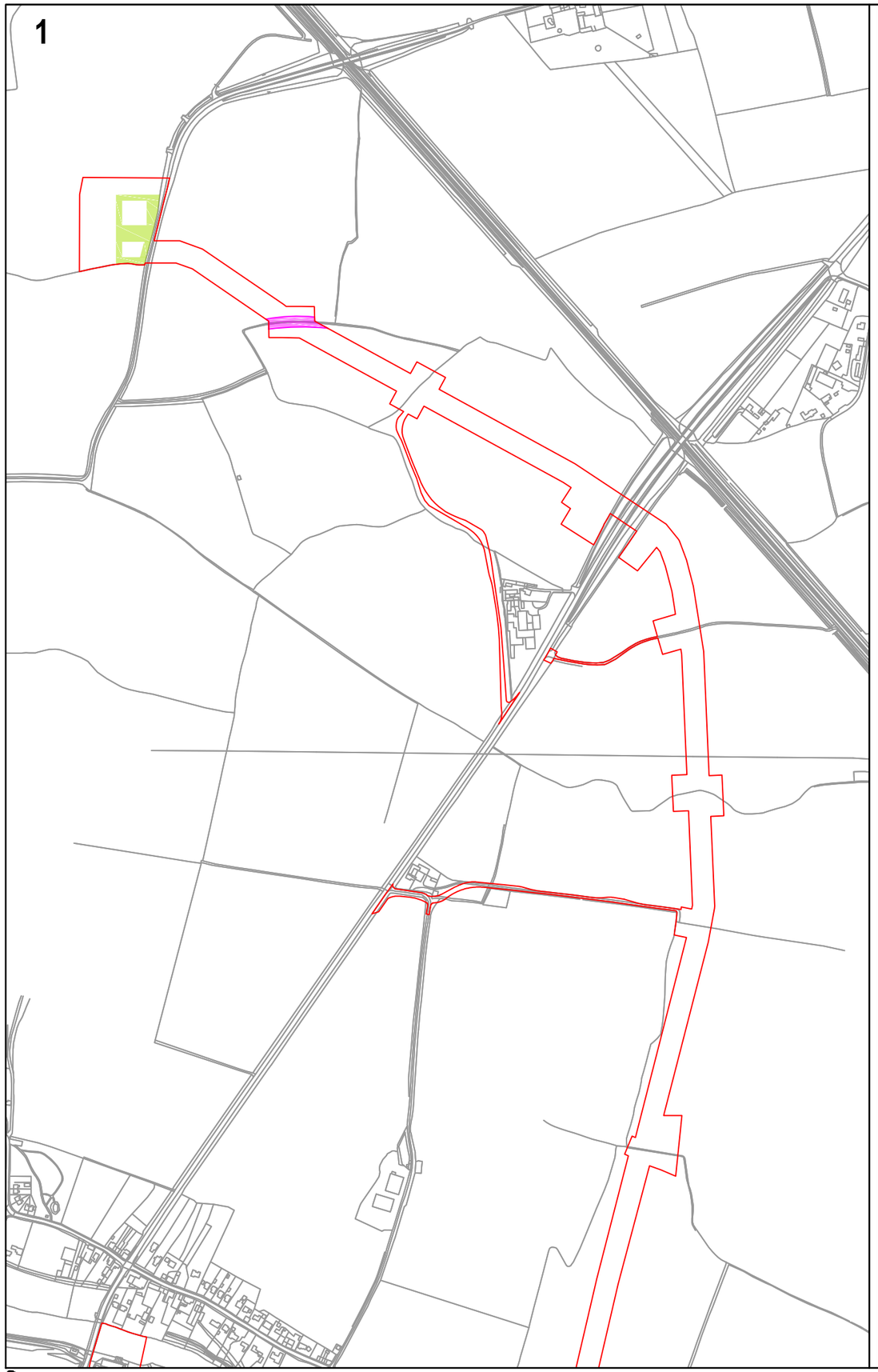
North Yorkshire County Council, Selby District Council and the Selby BAP Partnership (2004) *Selby Biodiversity Action Plan*

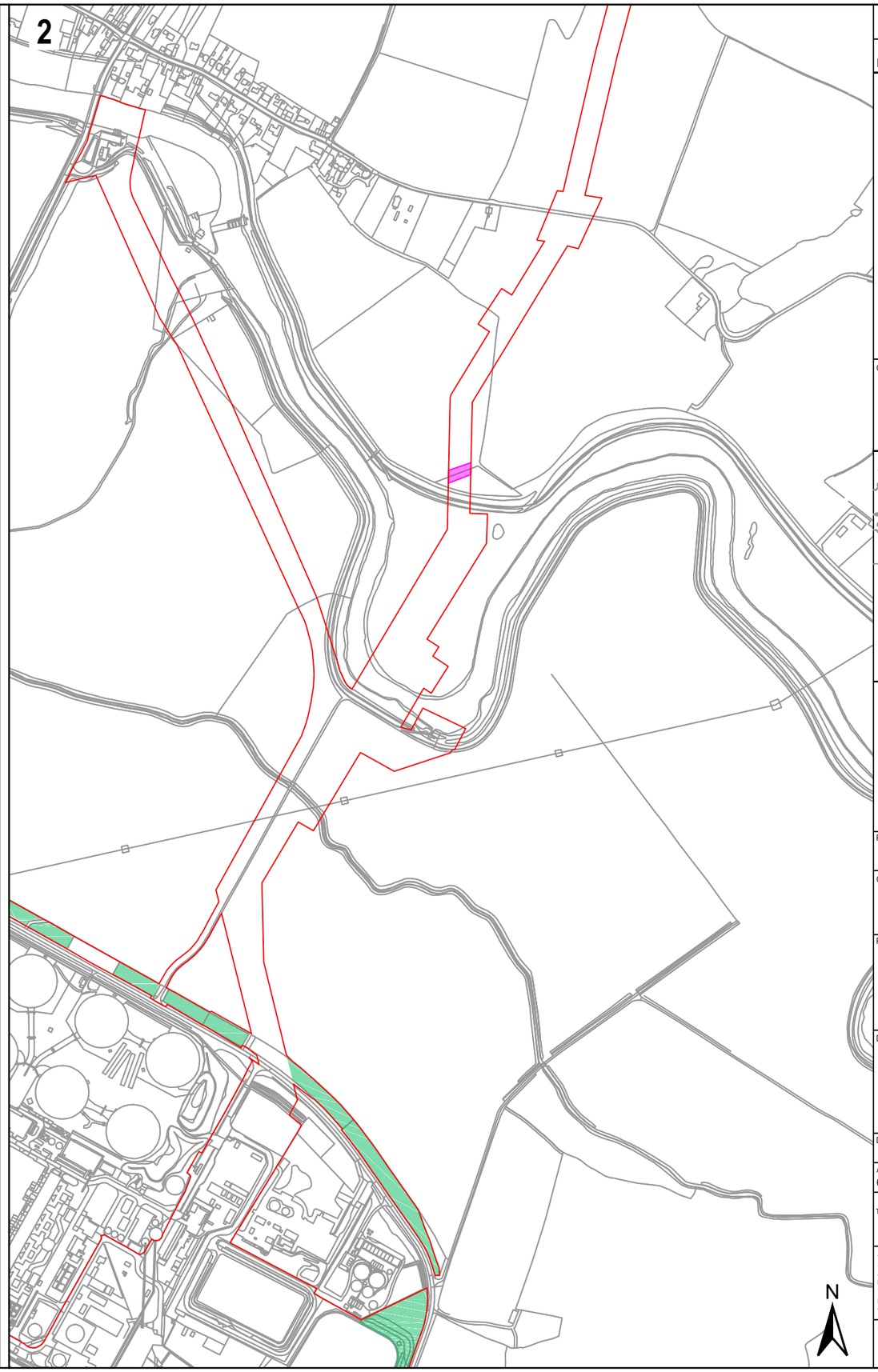
Selby District Council (2005) *Selby District Local Plan*

Selby District Council (2013) *Selby District Core Strategy Local Plan*

FIGURES

Figure 1: Landscape and Biodiversity Enhancement Proposals





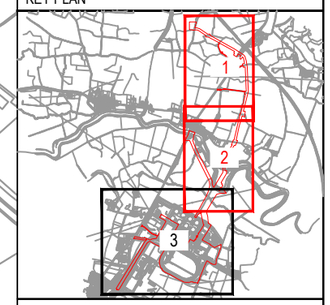
THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

▭	THE ORDER LIMITS
🟩	EXISTING WOODLAND MANAGEMENT
🟨	SPECIES RICH GRASSLAND
🟦	NEW ATTENUATION POND
🟪	HEDGEROW REPLACMENT
🟩	AGI PLANTING

Copyright

KEY PLAN



Infrastructure Planning
(Applications: Prescribed Forms and Procedure)
Regulations 2009 - Regulation 5(2)([illegible])

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
FIGURE 1
INDICATIVE LANDSCAPE AND
BIODIVERSITY PLAN
SHEET 1 OF 2

Drawn	Checked	Approved	Date
HB	RC	KC	30/03/2017

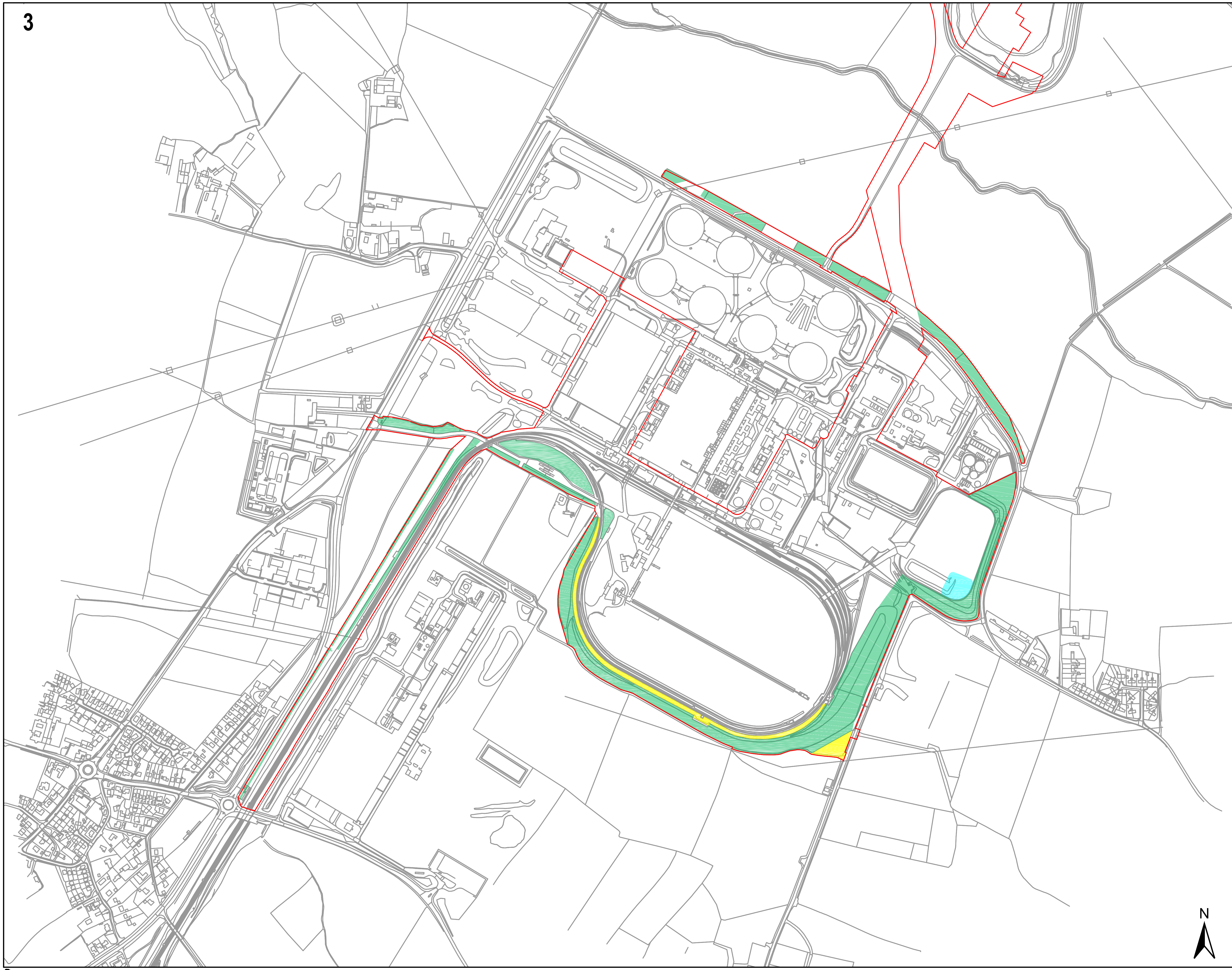
AECOM Internal Project No.	Scale @ A3
60506766	1:8000

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
FIGURE 1	01

ISO A3 2 7 20 Plotted: 2017-05-18 HANS.BEDEY NEWPRO E 050 7 - EGGBOROUGH CCGT CAD FIGURES 1 10.1 AND 13 - INDICATIVE LANDSCAPE AND BIODIVERSITY PLAN.DWG

3

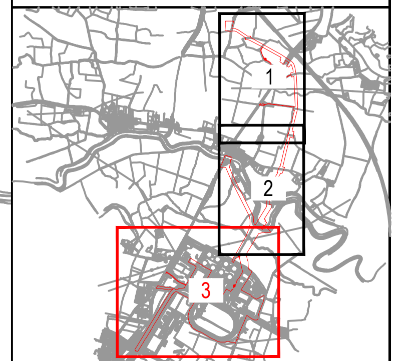


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- THE ORDER LIMITS
- EXISTING WOODLAND MANAGEMENT
- SPECIES RICH GRASSLAND
- NEW ATTENUATION POND
- HEDGEROW REPLACMENT
- AGI PLANTING

KEY PLAN



ISSUE/REVISION

I□r□□r□□□r□ P□□□□□□
(A□□□□□□□□□: Pr□□□r□□d F□r□ □ □□□d Pr□□□d□r□□)
R□□□□□□□□□200□ - R□□□□□□□□ 5(2)(□)

Purpose of Issue

DCO APPLICATION

Client

EGGBOROUGH POWER LTD

Project Title

EGGBOROUGH CCGT DCO

Drawing Title

FIGURE 1
INDICATIVE LANDSCAPE AND BIODIVERSITY PLAN
SHEET 2 OF 2

Drawn	Checked	Approved	Date
HB	RC	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:8000

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
FIGURE 1	01

APPENDIX 1: ARBORICULTURAL REPORT

APPENDIX 1: ARBORICULTURAL REPORT

CONTENTS

ANNEXES

ANNEX A: TREE CONSTRAINTS PLANS

ANNEX B: TREE SCHEDULE

ANNEX C: PROPOSED DEVELOPMENT PLANS

ANNEX D: TREE PROTECTION PLANS

1.0 INTRODUCTION

Introduction

1.1 AECOM was appointed by EPL to produce an Arboricultural Report, including a tree survey to British Standard (BS) 5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS 5837:2012), including an Arboricultural Impact Assessment (AIA) for the Site.

1.2 Tree Constraints Plans 60506766-ARB-001 to 010 (Annex A) illustrates the locations of the surveyed trees and the extent of the Root Protection Area (RPA) for each tree and tree group surveyed.

1.3 The Tree Survey Schedule (Annex B) provides guidance as to the nature and quality of the existing tree stock both on and immediately adjacent to the Site. This report identifies and assesses the potential effects that the Proposed Development may have on the trees and hedges of the survey area. It also identifies potential mitigation measures that would help to prevent or reduce potential adverse effects where possible.

Survey Area Description

1.4 The survey area included land within the boundaries of the Site, as defined by the indicative layout plans for the Proposed Development (Annex C), together with land adjacent to the Site where existing trees may have an effect upon, or be affected by, the construction of the Proposed Development.

1.5 The majority of the tree stock around the Proposed Power Plant Site and Proposed Construction Laydown Area comprises groups of trees that form screening from the surrounding areas. Trees within the Proposed Gas and Cooling Water Connections are generally made up of field boundary, private garden and highway edge trees.

1.6 The survey area comprises the Site, which includes parts of the existing Eggborough coal-fired power station, private land, public highways and parts of the Eggborough Sports and Leisure Complex. The A19 runs along the western edge of the existing coal-fired power station, extending north to south. The Proposed Gas Connection pipeline crosses this road further north.

Methodology

1.7 This tree survey was based upon a topographical survey relating to the parts of the Site within the existing coal-fired power station and was conducted in accordance with the requirements of BS 5837:2012.

1.8 Where additional trees were identified on Site, their positons have been mapped using a Global Positioning System (GPS) enabled Panasonic Tough Pad utilising ArcGIS software.

1.9 Trees have been evaluated in accordance with the criteria within 'Table 1 Cascade chart for tree quality assessment' of BS 5837:2012 – see Table 1 below. The arboricultural feature is initially classified upon the main categories below (U, A, B or C) followed by one or more sub-category (1, 2, and/or 3). It should be noted that each subcategory has equal weight.

Table 1: Cascade chart for tree quality assessment

Category	Criteria
U	Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years
A	Trees of high quality with an estimated remaining life expectancy of at least 40 years
B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm
Sub-Category	**Criteria**
1	Mainly arboricultural quality/value
2	Mainly landscape quality/value
3	Mainly cultural quality/value (including conservation)

1.10 Fieldwork was undertaken in February and March 2016 during which dimensional data and observational information were collected. A DBH (diameter at breast height) tape measure and 10 m tape measure were used.

1.11 Features comprising multiple trees, scrub or other arboreal features have, where sufficiently consistent, been categorised as grouped features listing species composition, age and condition ranges as appropriate to best describe each feature. Within these, principal trees have also have been identified where appropriate.

1.12 The fieldwork informing this report has comprised a non-intrusive, visual survey undertaken from ground level. Where further inspection is deemed appropriate to ascertain the condition of the tree or other arboreal features, this has been identified within the preliminary management recommendations. Average dimensions or dimensional ranges have occasionally been used where appropriate to best describe arboreal features. References to habitat value should be taken as comparative observations compared with a baseline situation with no tree present.

Weather

1.13 At the time of the surveys the weather was fine with good visibility.

2.0 GENERAL ARBORICULTURAL PRINCIPLES

General Principles

2.1 Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any project with the potential to impact on trees must take into consideration the value of trees on site, the impact of any proposed activity along with any potential future conflicts. Suitable measures to safeguard retained trees or mitigate the loss of trees to be removed will need to be fully considered and may be a condition of planning consent.

2.2 Tree branches and roots frequently grow across site boundaries and off site trees can pose a significant constraint and should be carefully considered when assessing a site.

Below Ground Constraints

2.3 Below ground tree roots and the soil environment in which they grow need to be protected if the tree is to be retained. Trees grow in association with fungi and other soil organisms which are of key importance to tree health. Roots are essential for anchorage, the uptake of water and nutrients and the storage of energy (carbohydrates) for the future growth and function of the tree.

2.4 Roots can be damaged by physical severance or wounding (*e.g*. following excavation of the soil) which can lead to the development of decay and a decline in vitality and/ or instability. Raising soil levels effectively buries tree roots at a depth where suitable conditions for growth are less available. Toxic materials discharged into the soil (such as cement based aggregates, fuel and chemicals) can lead to root death and dysfunction. Soils can be compacted to levels inhospitable to tree growth with even a single pass of machinery, regular pedestrian traffic or the storage of plant and materials. Relieving compaction can be problematic and may require costly remedial works. Changes in drainage and water levels can also have significant long term impacts for tree health.

2.5 The effects of these incursions may take many years to manifest, with a resulting decline in amenity value and potentially the death or failure of the tree. Older trees are particularly sensitive to damage and changes in conditions.

2.6 The RPA is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. This area is deemed to be particularly important for tree stability, growth, function and health. However roots may extend far greater distances, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients). It is generally accepted that tree roots are predominantly located in the upper 1,000 mm of soil; however roots may develop at deeper levels where conditions allow.

2.7 RPAs are calculated as per BS5837:2012 Trees in relation to design, demolition and construction Annexes C and D and Section 4.6 (Recommendations).

2.8 The RPA of the existing tree stock is an important material consideration when considering site constraints and planning development activities. The RPA of significant trees on site is shown on the drawings in Annex A.

2.9 The default position must be that all development, including any associated services will occur outside the RPAs of retained trees. Where this is unavoidable it may be appropriate to use special

measures to install structures, services or surfacing within RPAs which allow the protection of roots and soil structure which are essential for tree growth and keep any incursion to a minimum.

2.10 Further steps to improve or increase the useable rooting area available to the tree may also be required.

Soils

2.11 On shrinkable clay soil tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season.

2.12 Soils must be carefully assessed and any foundations must be installed following the recommendations of NHBC Standards Chapter 4.2: Building Near Trees (2008) to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils re-wet. The advice of a suitably qualified engineer must be obtained to inform any potential issue of heave. The UK Soil Observatory records the general soil types in the various areas as 'Sand to Sandy Loam, Sand to Loam, Clayey Loam to Silty Loam, Clay to Sandy Loam and Clay to Clayey Loam', as shown on the UK Soil Observatory (UKSO) Soil Map Viewer (UKSO, 2017). Specific advice in relation to this topic is beyond the scope of this report.

Above Ground Constraints

2.13 Tree stems and branches can restrict available space on site. Damage or wounding (including excessive pruning) can significantly reduce the amenity contribution along with the energy production (via foliage) and storage capacity (via woody material) of the tree and may in turn lead to the development of dysfunction and decay with significant long term implications for tree health. The future impact of existing trees should be carefully considered, including individual species characteristics (such as potential future size, fruit fall, shade *etc*.) and how the tree will interact with any proposed development and future land use. Annual tree growth can lead to direct damage if stems/ branches (or roots) come into physical contact with structures and this must also be taken into consideration.

Root Protection Area

2.14 The RPA defines the approximate underground area occupied by the tree roots based on a calculation relating to the girth of the tree, point above ground at which the trunk begins to branch out and the number of stems. BS5837:2012 outlines the calculation of RPA as follows:

$$\text{RPA (m}^2\text{)} = \left(\frac{\text{Stem diameter (mm) at 1.5 m height above ground x 12}}{1{,}000} \right)^2 \times \pi\ (3.142)$$

2.15 Trees with more than one stem below 1.5 m height are given an aggregate stem diameter using either of the following two calculations as outlined in BS5837:2012. This diameter is then used in the above calculation to estimate RPA:

a) For trees with two to five stems:

$$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 + (\text{stem diameter 5})^2}$$

b) For trees with more than five stems:

$$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$$

2.16 The RPA of existing tree stock is an important material consideration when considering site constraints and planning development activities.

2.17 Construction activities, materials storage or changes in level should generally be avoided within the RPA of a tree to be retained. This is because these activities have the potential to damage or kill the tree. This is significant when considering construction in close proximity to off-site/ third party land. Special construction techniques, *i.e*. no-dig construction/ permeable surfacing may be considered for light loadings, *e.g*. pedestrian footpaths *etc*., within the RPA.

2.18 It should be noted that the RPA often varies in size to the physical area occupied by the canopy spread (due to particular tree species or management practices to artificially alter the canopy size). This is of particular importance when integrating new development in close proximity to existing trees. Similarly, the canopy heights (as identified in the Schedule of Existing Trees, Annex B) should be considered as the usable space below a low branching tree will be severely restricted without specific arboricultural works to raise the canopy (which may not always be appropriate).

2.19 It should also be noted that BS 5837:2012 states that although RPAs should be plotted as a circle centred on the base of the stem, pre-existing site conditions or other factors may indicate that rooting has occurred asymmetrically and so RPAs may instead be represented as a polygon of equivalent area.

3.0 FIELDWORK OBSERVATIONS

Areas of the Site Within the Existing Coal-Fired Power Station

3.1 This part of the survey area is located within the existing coal-fired power station site. The village of Chapel Haddlesey lies to the north with the village of Hensall to the east. The A645 runs east to west to the south beyond which is M62 also running east to west. The village of Eggborough lies to the south-west and the village of Kellington to the west.

3.2 There is a broad range of trees within this part of the survey area; generally in good to fair condition although a small number of trees were rated as poor and/or dead condition. The majority of the trees ranged between young and semi-mature with fewer trees qualifying as either mature or early mature. The predominant species are oak (*Quercus* sp.*)*, alder (*Alnus* sp.), maple *(Acer* sp.*),* birch *(Betula* sp.*)*, pine *(Pinus* sp.*)*, poplar (*Populus* sp.*)*, willow *(Salix* sp.*)* with other species including ash *(Fraxinus.excelsior)*, cherry laurel *(Prunus laurocerasus),* holly (*Ilex aquifolium)*, larch (*Larix* sp.*)* and hawthorn *(Crataegus monogyna)*.

3.3 The trees were generally split between those categorised as C (low quality) and B category (moderate quality).

3.4 In locations immediately adjacent to the Proposed Power Plant Site, groups of trees contribute to visual amenity and screening. The rail line entering the Site to the west (in the Proposed Rail and Access Works area) runs between two steep banks upon which linear groups of trees have been planted to aid visual screening from the main part of the existing coal-fired power station site. Tranmore Lane in the west of the Site has multiple groups and individual trees providing screening (G100, G107 and T116 to G134). Additional groups of trees are located around the western, southern and eastern boundaries of the Proposed Power Plant Site (G50 to G57, G62 and G71) which provide good screening benefits to the surrounding area. In particular G55 to G57 are located on an embankment (in the Retained Landscaping Area) thus providing good screening for the wider area. G78 to G82 and G85 provide screening from the east towards the eight cooling towers of the existing coal-fired power station.

3.5 Various groups of block planting (G15 to G21) are located to the north of the Proposed Construction Laydown Area on the north side of Wand Lane (within the Retained Landscaping Area) providing screening benefits for locations further north (*e.g*. the village of Chapel Haddlesey).

3.6 T165 to G178 are located just outside the Proposed Power Plant Site (beyond the landscaped embankment) in the Proposed Surface Water Connection area. G175 runs the length of Hensall Dyke in the Proposed Surface Water Connection area to the culvert beneath Hazel Old Lane. The remaining trees are adjacent to this highway.

3.7 One group (G67) was categorized as 'U' requiring immediate removal due to their hazardous condition and location next to a railway line and the Proposed Power Plant Site. Two trees located around Tranmore Lane were categorized as 'U' requiring immediate removal due to their hazardous condition and location next to an access road and golf course. On the west boundary of the A19, opposite the Tranmore Lane access road, two further trees have been identified for immediate removal due to their hazardous condition and location. A final tree (T168) located to the south-eastern corner of the Proposed Power Plant Site, on the western verge of Hazel Old Lane, has been

identified for either removal or monolithing (retaining a standing dead stem as a habitat feature) due to its structural condition and location next to a public highway.

3.8 No A category trees were identified within this part of the survey area.

3.9 A detailed schedule of all trees can be found in Annex B.

Proposed Gas and Cooling Water Connection Corridors

3.10 This part of the survey area is located within a rural setting extending north from the existing coal-fired power station site. The Proposed Cooling Water Connections are located between the existing coal-fired power station and the River Aire, and the Proposed Gas Connection beneath the River Aire, to the east of Chapel Haddlesey, heading north through agricultural land and across minor roads, then crosses the A19, heading west across agricultural land just south of the East Coast Main Line railway.

3.11 The range of trees within this part of the survey area are generally in good to fair condition, although a small number of trees are rated as poor condition. The majority of the trees ranged between semi-mature and early mature, with fewer trees qualifying as mature. The predominant species are oak (*Quercus* sp.*)*, willow *(Salix* sp.*),* maple *(Acer* sp.*),* pine *(Pinus* sp.*)*, ash *(Fraxinus.excelsior),* poplar, (*Populus* sp.*)*, sycamore (*Acer pseudoplatanus),* hawthorn *(Crataegus monogyna)*, beech *(Fagus sylvatica)*, cherry *(Prunus* sp.*)*, holly *(Ilex aquifolium),* birch *(Betula* sp.*)* with other species including elder (*Sambucus nigra*), cypress *(Cupressus* sp.*),* blackthorn *(Prunus spinosa)* and cherry laurel *(Prunus laurocerasus)*.

3.12 The trees were generally split between those categorised as C (low quality) and B (moderate quality). Six individual trees and one group were categorised as A (high quality).

3.13 The majority of the vegetation located along the Proposed Gas Connection corridor is comprised of field boundary trees/ hedges. A small number of trees provide screening at the Proposed Water Connection abstraction point (which is currently used by the existing coal-fired power station), adjacent to the A19. A combination of private, field boundary and highway screening trees populate the proposed access routes to the Proposed Gas Connection corridor.

3.14 Six high quality A category trees/ groups and one moderate quality B category woodland are located along and in the vicinity of the proposed access routes to the Proposed Gas Connection construction corridor off the A19 at Whitings Lane and Fox Lane, to the north of Chapel Haddlesey.

3.15 One high quality A category tree is located along the Proposed Cooling Water Connection route to the existing cooling water abstraction point.

3.16 No U category trees were identified with this part of the survey area.

3.17 A detailed schedule of all trees can be found in Annex B.

4.0 ARBORICULTURAL IMPACT ASSESSMENT

Overview

4.1 The Arboricultural Impact Assessment (AIA) sets out the potential direct and indirect impacts of the Proposed Development on trees. The severity of impacts is considered and appropriate mitigation is proposed where it is reasonable to do so.

Proposed Development Plans

4.2 The development proposals for the Site are shown on ES Volume II Figures 4.1a – 4.4 (reproduced in Annex C). Further information on the Proposed Development is contained within Chapter 4: The Proposed Development, Volume I of the Environmental Statement (Application Document Ref No. 6.2).

Construction Impacts

4.3 Construction works can lead to damage to above ground parts of trees, root severance, the discharge of materials toxic to roots and soil organisms into the soil, significant compaction of the soil to levels detrimental to tree health and the raising of soil levels burying tree roots at depths were function is impaired. These issues can lead to the death or decline of trees and the loss of the associated amenity that they provide.

4.4 Access for construction works will be required in close proximity to categorised trees or tree groups. Construction work activities required within the RPA and/ or crown spread of retained trees will be carefully controlled with the use of temporary fencing, ground protection measures and by adopting working methods set out in an Arboricultural Method Statement (AMS) (to be prepared in accordance with a draft DCO Requirement regarding landscaping) to ensure that trees are not damaged.

Protective Fencing and Ground Protection

4.5 Temporary tree protection fencing that meets the requirements of BS 5837:2012 will be installed before works commence and also for the duration of the works to protect the RPAs of retained trees.

4.6 Where construction working space or temporary construction access is required within the identified RPAs, suitable ground protection measures will be implemented to prevent the distortion or compaction of the underlying soil. The ground protection will be appropriate to the likely vehicle or pedestrian usage anticipated for the area concerned.

Trees to be Removed

Areas of the Site Within the Existing Coal-Fired Power Station

4.7 Construction of the Proposed Development will require the removal of twenty four trees/ tree groups in full and seven tree/ tree groups in part (see Table 2: Tree Works for a detailed list). Of these trees/ tree groups fifteen have been classified as B category and sixteen as C category.

4.8 The removal of B category trees to facilitate development will be carefully considered as part of the detailed design process. Suitable replacement planting will be provided as mitigation if their removal cannot be avoided.

4.9 G51 is located well within the existing coal-fired power station site and therefore does not provide wider public amenity. Partial removal of this group is not considered to have an impact on the overall amenity of the area.

4.10 Tree group G62 are screen plantings providing a substantial level of visual screening to locations east of the Site. This group will require partial removal, the section requiring removal is located to the west of the group and will be comprise a narrow linear strip running north to south. The area for removal increases at the northern end of the group although losses will be contained to those trees facing into the Site. These losses are not considered to have an impact on the overall amenity of this group to the wider area.

4.11 Tree groups G69 and G70 will also require removal. These groups are located within the Site and are also partly obscured by G57 to the east and are not visible to the wider area. The loss of these trees is not considered to have a notable impact on the amenity of the wider area. G69 and G70 are B category groups and therefore suitable replacement plantings will be carried out to mitigate this loss. G68 has been classified as C category, the loss of these trees should not be considered a constraint to development.

4.12 A large section of G71 will require removal. These trees are located to the west of G57 and as such, are obscured from the wider area. The loss of these trees is not considered to have a notable impact on the amenity of the local area although as B category trees suitable replacement plantings will be carried out to mitigate the loss of amenity to the Site in general.

4.13 G73, G74, G76 and G77 are amenity plantings adjacent to an access road within the existing coal-fired power station site. This area is not visible to the general public and therefore not considered to have a significant impact on the amenity of the area. All of these groups, except for G75, have been categorized as B category trees. Suitable replacement plantings will be carried out to mitigate these losses.

4.14 Tree group G85 will require partial removal along with T86 which is adjacent. T86 is a prominent tree at an entrance road into the existing coal-fired power station site off Wand Lane. Suitable mitigating replacement planting will be implemented if their removal is unavoidable.

4.15 Tree group G89 form screen planting around a lagoon. This is an internal feature with minimal visibility outside of the Site. The loss of these trees will be mitigated with suitable replacement plantings.

4.16 G90 is a group of trees providing screening from the private railway line within the Site. The amount of tree removal required is limited and is not considered to have a substantial impact on the amenity to the area. These trees have been categorized as B category trees. Suitable replacement plantings will be carried out to mitigate these losses.

4.17 Tree group G119 is considered to require removal due to its location along the route of the Proposed Towns Water and Borehole Water Connection, this group offer limited visual amenity from outside the site and the loss of these trees will be mitigated with suitable replacement planting.

4.18 T170 is likely to require complete removal for the construction of the Proposed Surface Water Connection to Hensall Dyke, but this cannot be confirmed until the detailed design stage. This is a prominent tree adjacent to the highway. Suitable mitigating replacement planting will be undertaken if its removal is unavoidable.

4.19 All other trees listed within Table 2 as requiring removal have been classified as category C trees, it is therefore considered that their removal can be easily mitigated with appropriate replacement planting.

Proposed Gas and Cooling Water Connection Corridors:

4.20 Construction of the Proposed Development will require the removal of twelve trees/ tree groups in full and seven tree/ tree groups in part (see Table 2: Tree Works for a detailed list). Of these trees/ tree groups nine have been classified as B category and fourteen as C category.

4.21 The removal of B category trees to facilitate development will be carefully considered during the detailed design stage and removal avoided where possible. Suitable replacement planting will be provided as mitigation if their removal cannot be avoided.

4.22 Tree group G1 are prominent trees running adjacent to an access road from the A19. These trees provide visual amenity to the adjacent highway and wider area.

4.23 Tree group G11 and individual trees T13 and T14 are located along the bank of a small unnamed watercourse adjacent to a farm access track. These are prominent trees within the immediate location with some visibility to Chapel Haddlesey to the north.

4.24 Minor sections at the eastern end of G15 and western end of G19 will need to be removed to facilitate the excavation along the existing access track from Wand Lane north towards the Proposed Gas and Cooling Water Connections. These are linear belts of trees providing amenity and screening value along the northern boundary of the existing coal-fired power station site.

4.25 Large sections of G21 and G85 will require removal to enable the construction of the Proposed Gas and Cooling Water Connections. These are linear belts of trees providing amenity and screening value along the northern boundary of the existing coal-fired power station site. It may be possible to replant part of these areas, although an easement will be maintained for access and maintenance purposes.

4.26 Tree groups G156 and G157 will require partial and complete removal respectively, these are old boundary trees located within arable land away from public highways. They do, however, provide some visual amenity to a small road to the north (West Lane). Part of G157 (approximately one third) can be retained.

4.27 All other trees listed as requiring removal within Table 2 have been classified as C category trees and as such it is considered that their removal can be mitigated with appropriate replacement planting.

4.28 Following tree removals, the adjacent retained trees will be assessed by an arboriculturist and where relevant an additional tree works specification in relation to access and clearance requirements and to the structural integrity of retained trees will be developed.

4.29 As part of the detailed design, new services and pipelines will be routed outside the RPA of trees where practicable, following the recommendations set out in BS5837: 2012. This may reduce the number of trees affected.

Incursion into the RPA or Crown Spread of Retained Trees

4.30 Incursion into the RPA of a retained tree can result in unacceptable damage or injury to both above and below ground parts of the tree. This could be via physical injury (direct damage) or by impacting on the conditions which are essential to tree function and vitality (indirect damage).

4.31 The recommendations of BS 5837:2012 are that this can be avoided by the use of suitable protective fencing and the careful storage and management of materials, machinery and people in specially allocated zones outside RPAs. This will ensure that the RPA remain fully protected wherever possible.

4.32 Where this is not feasible, the construction methods will be set out in an AMS and guidance followed as set out in Table A.1 from Annex A of BS 5837:2012 and the principles set out in the National Joint Utilities Group (NJUG) Volume 4: Guidelines for the Planning, Installation, and Maintenance of Utility Apparatus in Proximity to Trees (issue 2) dated 16th November 2007.

4.33 Excavation within an RPA will be avoided wherever possible. Where this is not possible, excavation will be carried out using hand tools. Any roots greater than 25 mm will not be severed. If this is not possible, advice will be sought from a suitably qualified arboriculturist. Roots smaller than 25 mm will be cut using sharp secateurs or pruning saw to ensure clean cuts are made.

4.34 Section 7.2 of the BS 5837:2012 document offers guidance on best practice when working in and around the RPA of protected trees, which will be followed.

4.35 The Proposed Development is likely to directly conflict with the RPAs of a number of trees as described below which have not been considered within the previous sections. At present the assessment is based on the indicative layouts and worst case assumptions regarding the construction working corridors for below ground connections (electricity, water and gas), but the final details will be confirmed when the detailed design has been undertaken and AMS are produced in accordance with DCO Requirement.

Areas of the Site Within the Existing Coal-Fired Power Station Site

4.36 The footprint of the Proposed Development conflicts with the RPA of the following retained trees: G58, G61, G62 and T99. Where parts of groups are to be removed, the remaining edge trees will be assessed for any additional tree works required by an arboriculturist.

4.37 Part of all of the above groups will need to be removed to facilitate the Proposed Development. Those parts of the groups that remain will be protected from compaction and above ground damage during the works involved to remove certain trees. This can be achieved by installing temporary protective fencing immediately adjacent to the footprint of the Proposed Development. Incursion into the RPAs of these groups will follow guidance as outlined at the beginning of 4.5.

4.38 Prior to the commencement of the construction works, it will be necessary to undertake above ground pruning of trees in order to achieve appropriate height clearance to enable the construction

of the Proposed Development. For those groups that are partially removed, as mentioned above, pruning may also be necessary on the remaining trees if access is restricted. Following tree removals, the remaining trees are to be assessed by an arboriculturist and an additional tree works specification in relation to access and clearance requirements and to the structural integrity of retained trees will be developed in accordance with DCO Requirements.

4.39 T99 will require lifting works to achieve appropriate clearance for machinery required to carry out works to repair/ install the Proposed Borehole Connection.

4.40 G51 are classified as B category trees. This group are located well within the existing coal-fired power station site and therefore do not provide wider public amenity. The eastern edge of the RPAs of the retained trees within this group will be impacted. Section 7.2 of the BS 5837:2012 document offers guidance on best practice when working in and around the RPA of protected trees.

4.41 T116, G117, G119, G120 and G123 will also be impacted by the Proposed Towns Water and Borehole Water Connections. The pipelines will be routed to the south of these groups. The southern edge of the RPAs for G117, G119, G120 and G123 may be impacted, depending on the final detailed design. Section 7.2 of the BS 5837:2012 document offers guidance on best practice when working in and around the RPA of protected trees.

4.42 G175 and G176 are likely to be impacted by the Proposed Surface Water Connection to Hensall Dyke in the south-east of the Site. Parts of G175 and G176 may require removal. The RPAs of the remaining trees will be protected as shown in the Tree Protection Plan (TPP) (Annex D).

4.43 The construction of the Proposed Surface Water Drainage Connection will take place immediately adjacent to the RPA of G57. Where the works encounter roots of adjacent trees outside the theoretical RPA, excavation works will be carried out using hand tools. Any roots greater than 25 mm will not be severed. If this is not possible, advice will be sought from a suitably qualified arboriculturist. Roots smaller than 25 mm will be cut using sharp secateurs or pruning saw to ensure clean cuts are made.

4.44 Additionally, there may be occasions where adjacent tree canopies overhang the works areas and prevent access. In these circumstances it will be necessary to undertake selective pruning of branches to facilitate access, where this is required all works will be undertaken to BS 3998: 2010 Tree work – Recommendations.

Proposed Gas and Cooling Water Connection Corridors:

4.45 Thirteen tree groups will require partial removal to facilitate the construction of the proposed gas and cooling water connection, , the remaining edge trees within these groups will be assessed by an arboriculturist to identify any additional tree works required..

4.46 T29 to T36 (excluding T30) are a mixture of A and B category trees located along the proposed access route from Fox Lane to the Proposed Gas Connection corridor, and their protection will be required by way of suitable ground protection measures where access is required into their RPAs. A temporary surface, such as Cellweb TRP, will be installed to avoid root compaction during works (the location of which is shown on the TPP in Annex D). This will be installed under the supervision of an arboriculturist and in accordance with an AMS. Fencing will be positioned on the immediate edge of

the temporary surface. Prior to installation trees will be pruned back to give a 5 m clearance of the footprint to ensure a reasonable clearance for access.

4.47 Some minor pruning works will be required to these trees to ensure vehicles or machinery using the Fox Lane access point do not come into contact with trees. This will not have a significant negative impact on the health or amenity value of affected trees. Those trees requiring pruning works have been listed in Table 2 (see Section 5 below).

4.48 For those groups that are partially removed, as mentioned above, additional pruning may also be necessary on the remaining trees if access is restricted.

4.49 As part of the detailed design, new services and pipelines will be routed outside the RPA of trees where practicable, following the recommendations set out in BS5837:2012. This may reduce the number of trees affected.

Site Organisation

4.50 Suitable locations for site facilities and the washing, storage and mixing of materials will be identified such that they are at least 5 m from the outer edge of the RPA of any retained tree or protected tree planting area.

4.51 The mixing and washing of materials can lead to run off or inadvertent spillage into tree root zones. Many substances often used on construction sites can be toxic to tree roots (such as concrete, fuels, salts, builders sand and herbicides) and can result in the death of tree roots, beneficial soil organisms and have a significant impact on the future health and appearance of the tree. Potential for contaminated surface run off to affect trees will be avoided with the implementation of appropriate drainage measures in accordance with DCO Requirement.

4.52 The storage of materials can result in an effective raised soil level. This buries tree roots at depths where air and water are less available and can lead to the decline or death of the tree. For these reasons storage areas will be located outside the RPA of retained trees.

Movement of Vehicles and People and the Movement and Operation of Machinery

4.53 The movement of people, construction works and in particular the movement and use of machinery will be carefully coordinated to avoid damage to retained trees. Physical damage caused by impact with machinery can lead to the loss of branches and damage to bark. This can predispose trees to decay, reduce the energy production and storage capacity of the tree and significantly impact on the future health, appearance and amenity contribution of the tree. For these reasons site activities will take place outside the RPA of retained trees. A banksman will be in place for any vehicle movements within 5 m of any part of a retained tree. Boxing or additional protective fencing may be required where works close to tree stems is unavoidable to prevent potential impact damage.

Installation of Services

4.54 Excavation to install services has the potential to result in root severance, which could result in instability, dysfunction or death of trees within the survey area. Repeated incursions are particularly damaging and will be avoided by bundling services wherever possible.

4.55 No information is currently available in relation to the precise routing of services as this will be determined at the detailed design stage. Excavation to install services has the potential to result in unacceptable root severance which could result in instability, dysfunction or death of trees. Repeated incursions are particularly damaging and will be avoided by bundling services wherever possible.

4.56 The following general principles will apply and where services must be routed within the RPA of a retained tree this process will be subject to a detailed AMS.

4.57 All services within RPAs will be bundled as far as practicable and installed using hand/compressed air excavation (e.g. for shallow service runs) or trenchless techniques such as impact moling (thrust boring) with all access pits and inspection chambers being located outside of the RPA. The route will be located as far from the main stem of a retained tree as possible and at a minimum depth of 600 mm. This operation will take place as specified in an AMS. Any water pipes will be constructed so as to be resistant to ingress by tree roots, which could include the use of root barriers where appropriate.

4.58 Due consideration must also be given to the location of any new tree planting in relation to the positioning of services, with particular reference to Table A.1 from Annex A of BS5837:2012.

Retained Trees: Species Characteristics

4.59 Where trees are retained near to new developments, the future growth and characteristics of individual species must be considered in the long term to minimise future conflicts and potential pressure for future tree removal.

4.60 Trees adjacent to footpaths and access roads may require periodic pruning to prevent an obstruction. This work would not have a significant impact on the health or amenity of retained trees.

4.61 There is unlikely to be significant future pressure to remove trees associated with the future operation of the Proposed Development as retained trees will be managed as part of the final Landscape and Biodiversity Strategy, in accordance with a DCO Requirement.

New Tree Planting: Damage to Soil Structure

4.62 The soil in areas for new planting outside of existing RPAs will be protected from damage during the construction process so that new trees have access to soil of a suitable condition and volume for growth. This can be achieved using protective fencing and/or temporary ground protection (specified in relation to the typical loading expected). Where damage is unavoidable, remedial de-compaction works are likely to be required.

Installation of New Hardstanding

4.63 The construction of new hardstanding typically requires excavation and significant compaction of the soil. This will result in the severance of any tree roots located within the footprint area and the extensive compaction of the underlying soil which will result in conditions which are inhospitable for tree root growth and development. The severance of significant roots can lead to a decline in tree health and/or instability in the short term, or in the longer term as root decay progresses. Soil

compaction physically prevents root development and also restricts the diffusion of air and water which are essential for tree functions. This in turn is likely to result in a decline in tree health and potentially the loss of the tree.

4.64 Alternative methods of construction where new surfaces are installed using 'no dig' techniques utilising a load bearing surface which is laid on the existing surface of the ground can be used to avoid root severance and to reduce soil compaction to acceptable levels. This method does have an impact on the final levels of the route way as it requires an increase of up to 300 mm for the load bearing surface along with the depth of the final wearing course (dimensions of the surface should reflect the manufacturers specification).

4.65 Where new hardstanding is required within the RPA of a retained tree (such as within the RPA of T29-T36, excluding T30), this will follow the principles set out in an approved AMS.

Site Supervision

4.66 Whenever significant works are to take place within the RPA of a retained tree, activities will adhere to the specification outlined in the approved AMS.

4.67 Site supervision by an arboriculturist is likely to be required at agreed intervals for sensitive operations. This process will be auditable with a written report detailing the results of each visit.

5.0 TREE WORKS

5.1 Tree removals and protection measures are shown on TPPs in Annex D.

5.2 Table 2 below sets out those trees which will require removal to allow the construction of the Proposed Development. Trees have been assigned a category to indicate their quality as per Table 1 from Section 4.5.8 of BS5837:2012.

Table 2: Tree Works

Operation	A	B	C	U
Removal in full	N/A	Areas within Existing Coal-Fired Power Station Site: G69 to G71, G73, G74, G76, G77, T86, G89, G119 and T170 Proposed Gas and Cooling Water Connections: G1, T13, T14 and G156.	Areas within Existing Coal-Fired Power Station Site: G58 to G60, T63 to G66, G68, G72, G75, T84, G87 and G72 Proposed Gas and Cooling Water Connections: G2, G5, G6, T24 to T26, T158 and G180	G67and T168.
Removal in part	N/A	Areas within Existing Coal-Fired Power Station Site: G51, G62 , G85 and G90 Proposed Gas and Cooling Water Connections: G11, G15, G19, G21 and G157	Areas within Existing Coal-Fired Power Station Site: G61, G91 and G175 Proposed Gas and Cooling Water Connections: G23, G43, G44, G150, G153 and G181.	N/A
Trees requiring pruning	T29, T32 and T36	G15, G19, G21, T32, G51, G62, G71, , G81, G85, G90, G136 and G157	G4, G23, T30, T37, G43, G44, G58, G61, G68, G91, T169, G175 and G176	N/A

Trees to be Removed Due to a Direct Conflict with the Proposed Development

5.3 A number of tree removals are necessary due to a direct conflict with the Proposed Development. The loss of the Category C trees, the majority of which are of relatively low stature and amenity value, will be mitigated with the implementation of a planting scheme across the Site to be agreed as part of a Landscape and Biodiversity Strategy in accordance with a DCO Requirement. This represents an opportunity to replace low quality trees with younger better quality trees that have the potential to provide greater amenity in a significantly visible location. The removal of B category trees to facilitate development will be carefully considered during the detailed design process. Suitable replacement planting will be provided as mitigation if their removal cannot be avoided.

Groups of trees providing screening from the Site in particular will be replaced with suitable species to reinstate loss of screening where appropriate.

Trees to be Pruned to Facilitate the Construction of the Proposed Development

5.4 Pruning works are likely to be required in the interests of good arboricultural practice to ensure newly exposed trees within the groups that have been partially removed are structurally safe. Formerly sheltered trees exposed to inclement weather are at a higher risk to wind throw. An arboriculturist will inspect any newly exposed trees to assess their structural integrity. Additional tree pruning may be required to ensure a reasonable clearance of construction and enabling works and a specification for works will be developed by an arboriculturist following tree removals.

Trees to be Retained

5.5 Individual trees and tree groups categorised under BS 5837:2012 within the survey area will be retained and suitably protected throughout the construction of the Proposed Development. A TPP, 60504010-ARB-011 to 020 (Annex D), identifies those trees which are to be retained and protected during the construction phase.

6.0 **PLANTING RECOMMENDATIONS**

6.1 On completion of the proposed construction works, tree losses will be mitigated as part of the Landscape and Biodiversity Strategy in accordance with a DCO Requirement.

6.2 Given the surrounding context of the survey area and the tree specimens contained therein, the importance of the vegetation is a mixture of its landscape and amenity value. Where removal is necessary to facilitate the Proposed Development, replacement will be provided where feasible.

6.3 Any tree plantings will follow guidance as set out in BS 8545 Trees: From nursery to independence in the landscape.

7.0 **CONCLUSION**

7.1 The majority of trees and tree groups requiring removal within the existing coal-fired power station site are internal plantings offering limited screening of exterior views. It is considered that the removal of these trees can be mitigated with suitable replacement planting. The replacement planting provides the opportunity to increase the range of native species for ecological benefits and consider the longer term requirements to increase resilience to climate change as well as current and potential pests and diseases.

7.2 Potential removals (if alternative methodologies are not feasible) associated with the Proposed Gas and Cooling Water Connections will require the removal of screen planting adjacent to Wand Lane, and a small number of tree groups generally within open countryside along field boundaries. Some of these trees provide screening and a moderate degree of amenity value to the area. Replacement plantings with appropriate species and quantities can mitigate these losses in the medium to long term.

7.3 All other trees within the survey area will experience minimal to no impact from the Proposed Development. The use of appropriate tree protection fencing and ground protection measures as discussed within this report will enable retained trees to continue to provide the current benefits.

8.0 **REFERENCES**

British Standards Institution (2010) *BS3998:2010. Tree work – Recommendations.*

British Standards Institution (2012) *BS5837:2012. Trees in relation to design, demolition and construction – Recommendations.*

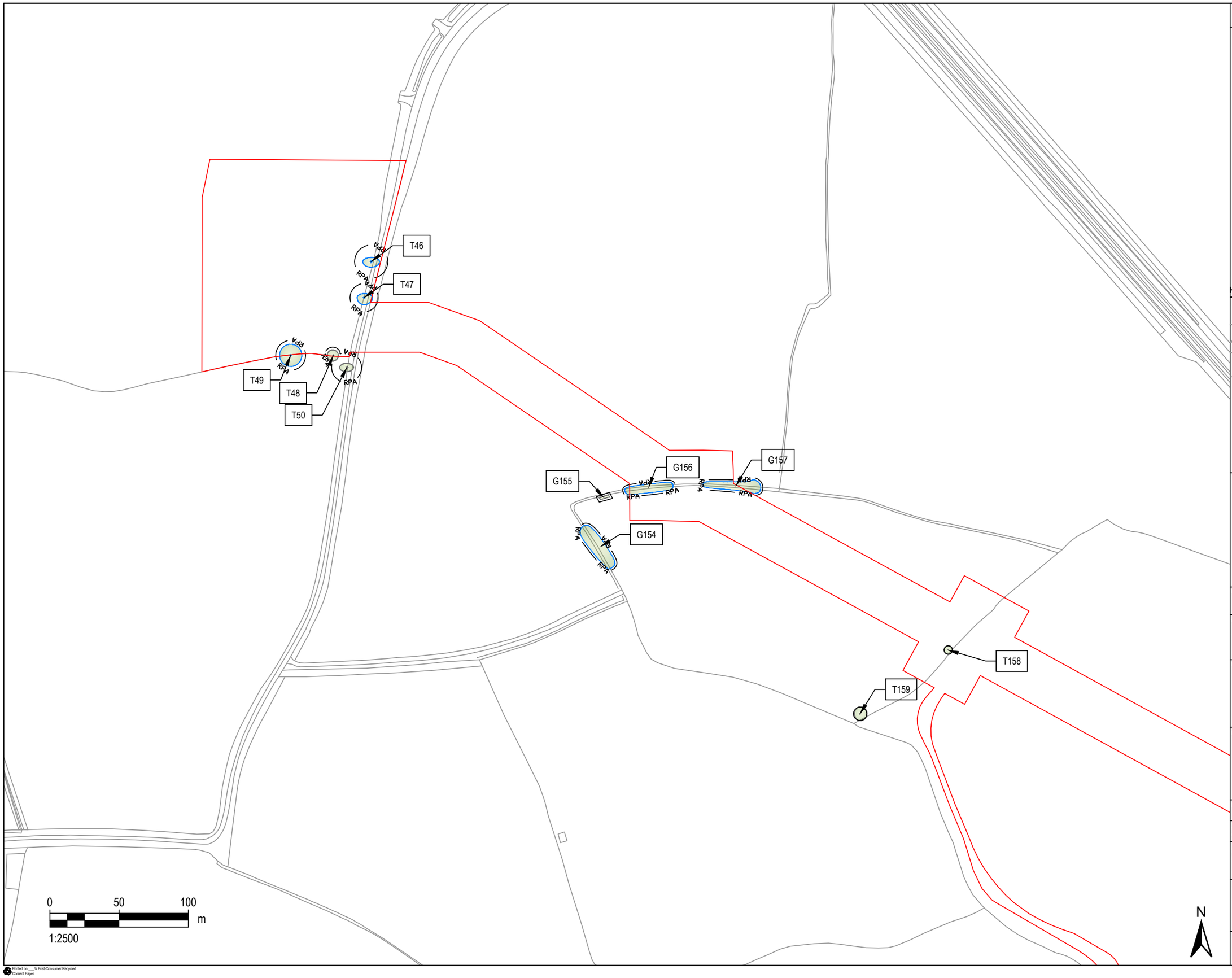
British Standards Institute (2014) *BS 8545:2014. Trees: From nursery to independence in the landscape*.

National House Building Council (2008) *National House Building Council (NHBC) Standards Chapter 4.2: Building Near Trees*

National Joint Utilities Group (NJUG) (2007) *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees, Volume 4, Issue 2*.

UKSO (2017) *Soil map Viewer* [Online] Available from: http://mapapps2.bgs.ac.uk/ukso/home.html [Accessed 16/03/17]

ANNEX A: TREE CONSTRAINTS PLANS

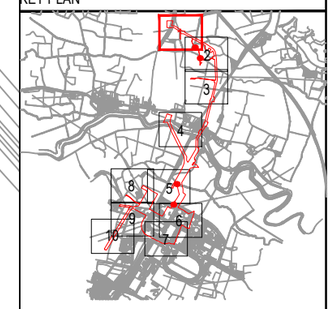


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

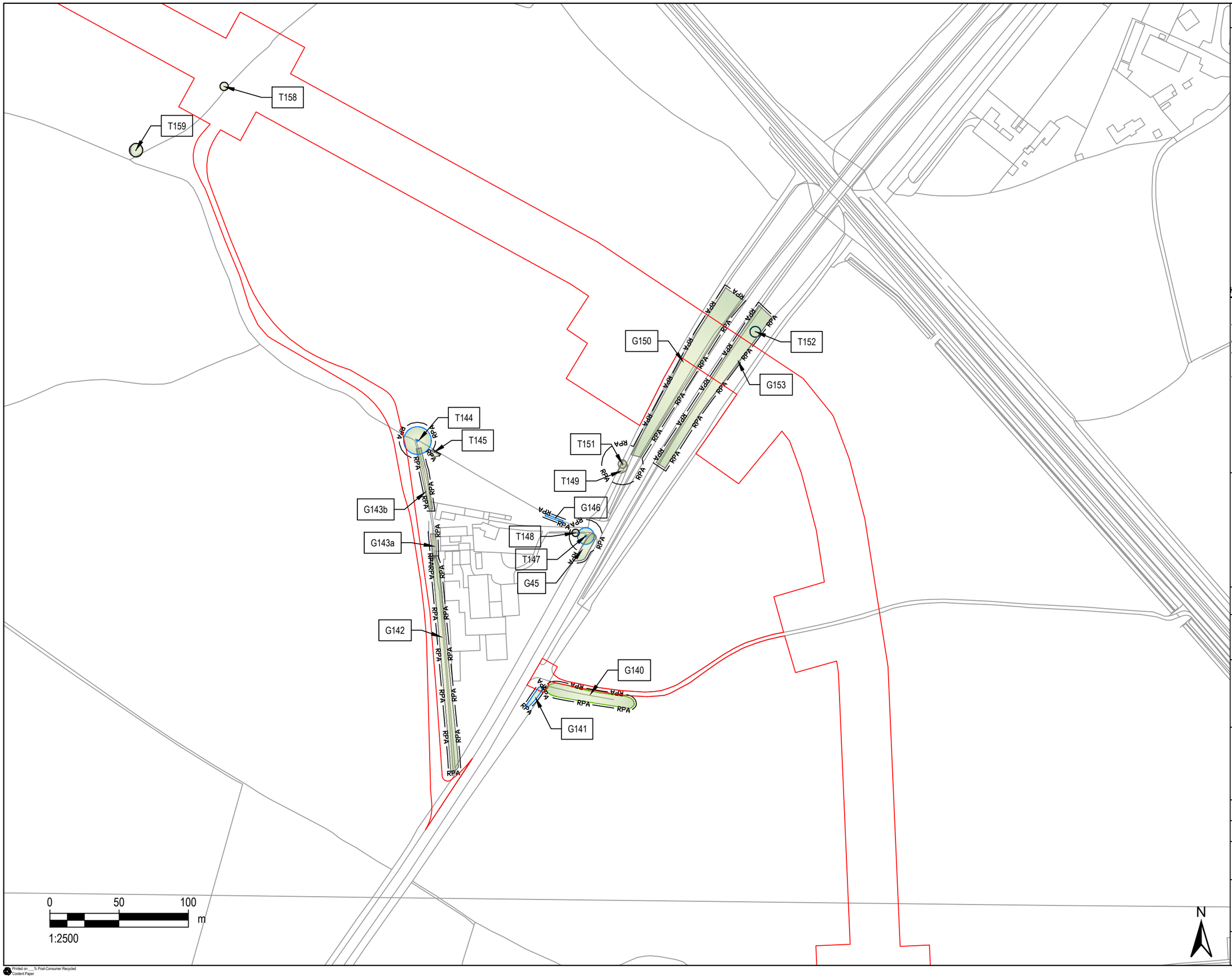
Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-001	01

ISO A3 297mm x 420mm

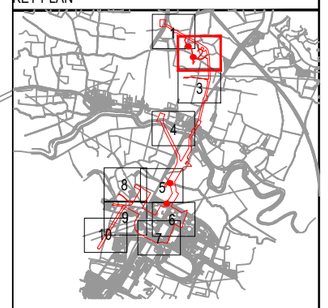


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

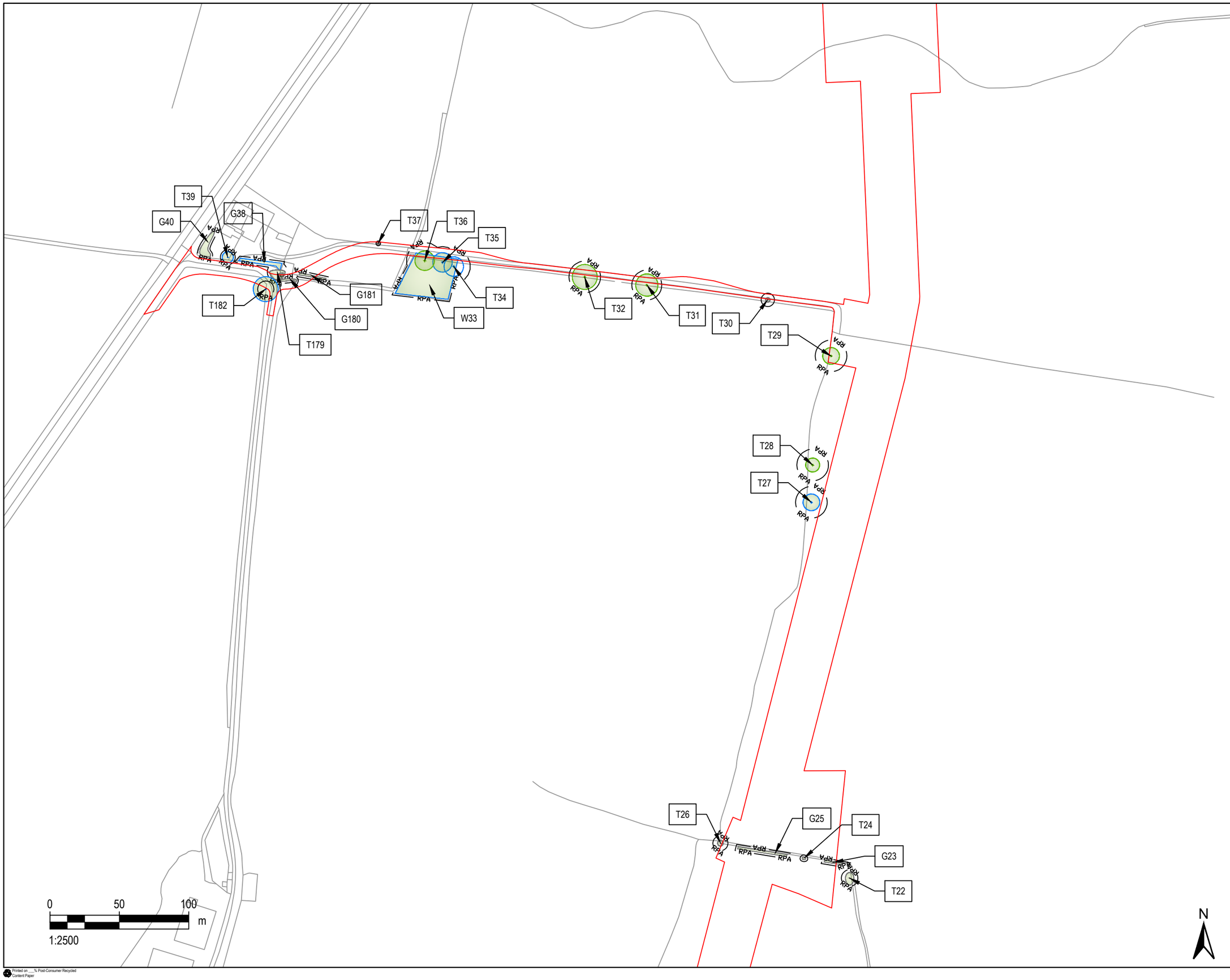
AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-002	01

Filename: K:\NEWPROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

ISO A3 297mm x 420mm

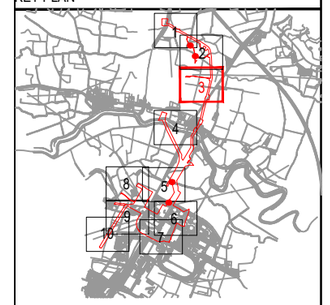


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-003	01

Filename: K:\NEWPRO\JE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN

0 50 100 m

1:2500

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

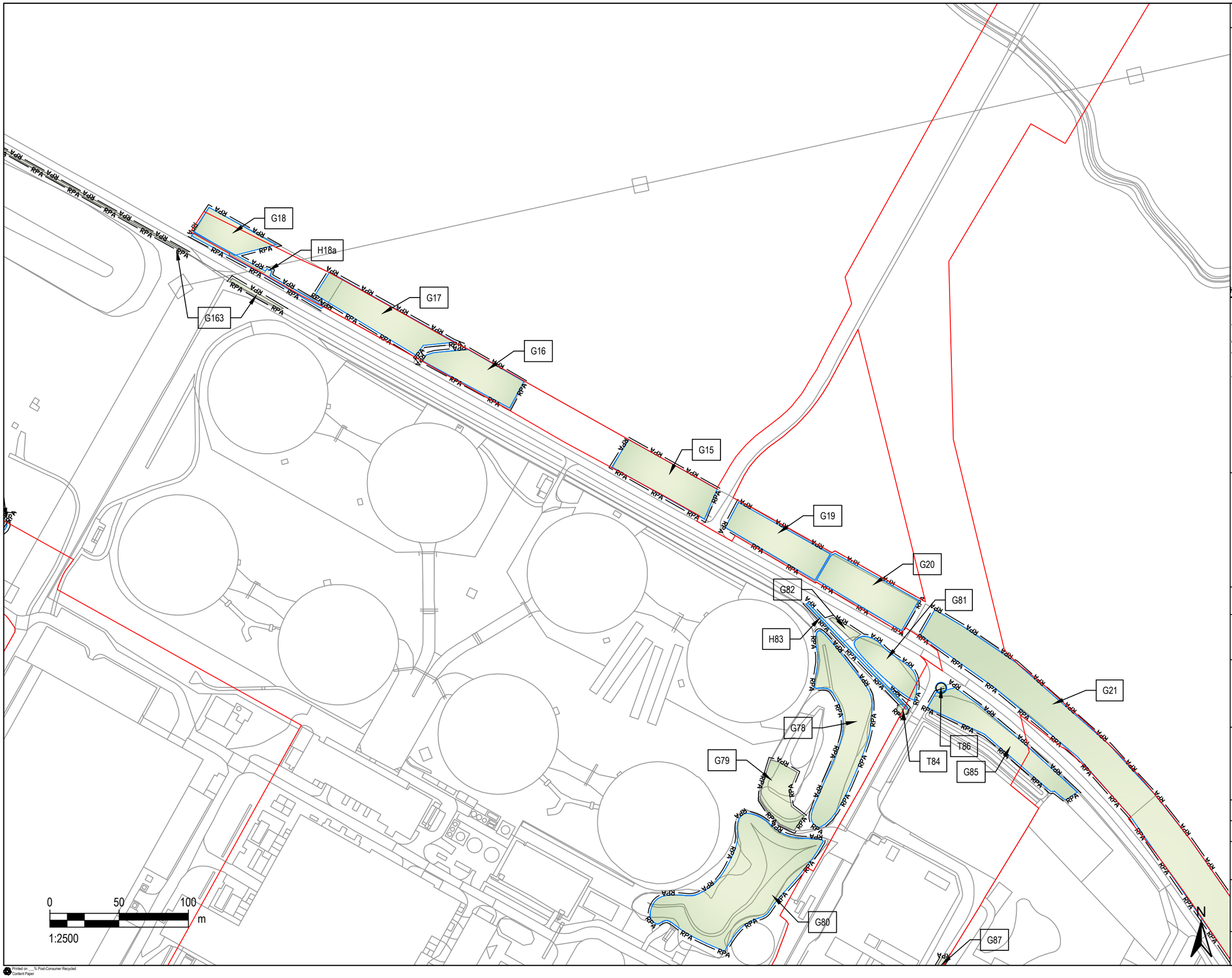
Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-004	01

ISO A3 297mm x 420mm

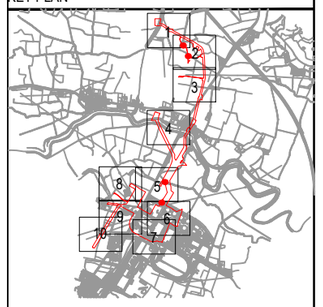


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number
60506766-ARB-005

Rev
01

Filename: K:\NEWPRO\E\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

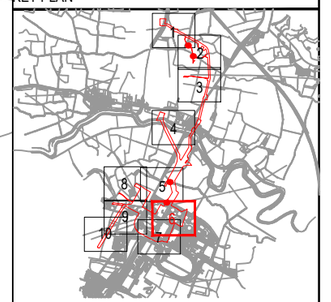
ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



G89 G65 G66 G67 G68 G69 G59 G60 G58 T63 G64 G62 G61 G70 G71 G57

0 50 100 m

1:2500

N

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-006	01

Filename: K:\NEW\PROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

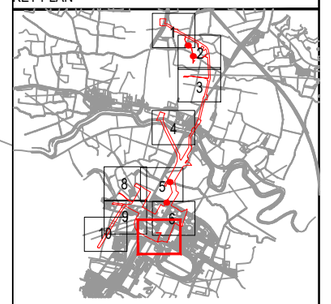
ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



G56 G57 G61 G70 G71 G167 G168 G169 G171 G175 G176 G178

T164 T165 T166 T169 T170 T172 T173 T174 T177

0 50 100 m

1:2500

N

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number
60506766-ARB-007

Rev
01

Filename: K:\NEWPRO\JE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN

G162

G112

H113

G115

T114

G110

T161

H160

G111

RPA

0 50 100 m

1:2500

N

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number
60506766-ARB-008

Rev
01

Filename: K:\NEW\PROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-001_010 V2.DWG Last saved by: GARETH.BLOOMER Last Plotted: 2017-05-19

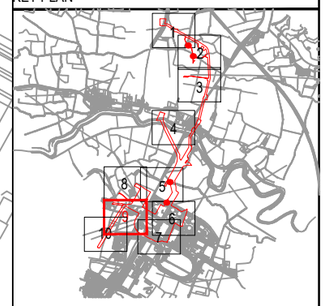
ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- RPA - ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN



0 50 100 m

1:2500

N

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017
AECOM Internal Project No.		Scale @ A3	
60506766		1:2500	

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number
60506766-ARB-009

Rev
01

ISO A3 297mm x 420mm

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- A - CATEGORY TREES (HIGH QUALITY & VALUE)
- B - CATEGORY TREES (MODERATE QUALITY & VALUE)
- C - CATEGORY TREES (LOW QUALITY & VALUE)
- U - CATEGORY TREES (DEAD, DEFECTIVE, INFECTED)
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS

KEY PLAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	18 04 2017	Sht 10 amended

Purpose of Issue: DCO APPLICATION

Client: EGGBOROUGH POWER LTD

Project Title: EGGBOROUGH CCGT DCO

Drawing Title: ARBORICULTURAL SURVEY AND CONSTRAINTS PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number: 60506766-ARB-010

Rev: 01

ANNEX B: TREE SCHEDULE

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G1	Pine (*Pinus sp.*) Hawthorn (*Crataegus monogyna*) Elder (*Sambucus nigra*)	15.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-EM	Good - Fair	Prominent trees close to highway (A19). Adjacent to access road, telephone lines within tree canopies. Broken branches on one pine tree in the group. Evidence of fly tipping at base of trees.	No action.	20+	B1,2	As plan
G2	Hawthorn (*Crataegus monogyna*) Elder (*Sambucus nigra*)	4.0	200 Avg	As plan				<1.0/All	<1.0	Fair	SM	Fair	Scrubby group of small trees visible to highway. Bramble growing in amongst the group.	No action.	20+	C2	As plan
G3	Hawthorn (*Crataegus monogyna*) Elder (*Sambucus nigra*)	4.0	200 Avg	As plan				<1.0/All	<1.0	Fair	SM	Fair	Scrubby group of small trees visible to highway. Bramble growing in amongst the group.	No action.	20+	C2	As plan
G4	Willow (*Salix sp*) Elder (*Sambucus nigra*) Hawthorn (*Crataegus monogyna*)	10.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Fair	Field boundary trees screening the adjacent highway. Dense vegetation and restricted access therefore unable to fully inspect. Windfall evident in the group with some dead wood throughout.	No action.	20+	C2	As plan
G5	Poplar (*Populus sp*) Elder (*Sambucus nigra*)	11.0	500 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-EM	Fair - Poor	Prominent river edge trees. Partial failures sitting in the river. Minor to moderate dead wood throughout.	No action.	20+	C2	As plan
G6	Poplar (*Populus sp*) Elder (*Sambucus nigra*)	12.0	450 Avg	As plan				<1.0/All	<1.0	Good - Poor	SM-EM	Fair - Poor	Prominent river edge trees, adjacent to highway and bridge. One multi stemmed tree has failed at the root plate and is now sitting in the river. Minor to moderate dead wood throughout the group.	No action.	20+	C2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G7	Ash (*Fraxinus excelsior*) Ash (*Fraxinus excelsior*)	16.0	850 Avg	As plan				<1.0/All	<1.0	Good	M	Good - Fair	Two large mature ash trees located on embankment of small stream. Restricted access therefore not fully surveyed. Broken branches, previous poor pruning to clear adjacent track. Minor to moderate dead wood throughout. Decay pockets on several main limbs.	No action.	40+	B1,2,3	As plan
T8	Field Maple (*Acer campestre*)	6.0	600	5.0	5.0	5.0	5.0	<1.0/All	<1.0	Good	M	Good - Fair	Mature tree located on embankment of small stream. Restricted access therefore not fully surveyed. Minor dead wood.	No action.	40+	B1,2,3	7.2
T9	Field Maple (*Acer campestre*)	7.0	600	4.0	5.0	6.0	5.0	1.5/N	2.0	Good	EM	Good	Field boundary tree, lean to the east. Broken branches, probably from farm machinery in adjacent agricultural field. Tight union, old wounds on main stem.	No action.	20+	C1,2	7.2
T10	Ash (*Fraxinus excelsior*)	5.5	280	1.5	1.5	1.5	1.5	2.0/E	4.0	Good	Y	Fair	Field boundary tree multi stemmed at 1.5m. Located in dense hedge therefore unable to fully inspect.	No action.	20+	C2	3.4
G11	Ash (*Fraxinus excelsior*) Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*) Cherry Laurel (*Prunus laurocerasus*)	15.0	350 Avg	As plan				<1.0/All	<1.0	Good - Poor	SM-EM	Good - Poor	Watercourse edge trees forming boundary between fields. Restricted access therefore not fully surveyed. Some windfall within the group. Tight unions and minor to moderate dead wood throughout. Prominent on the landscape.	No action.	40+	B1,2,3	As plan
T12	Ash (*Fraxinus excelsior*)	18.0	900	10.0	10.0	10.0	10.0	2.0/E	1.0	Good	M	Good	Large prominent tree on embankment next to watercourse. Restricted access therefore not fully surveyed. Broken branches, stubs, minor dead wood. Previous poor pruning to clear adjacent field.	No action.	40+	A1,2	10.8
T13	Field Maple (*Acer campestre*)	15.0	850	7.0	7.0	7.0	7.0	4.5/E	2.0	Good	M	Good - Fair	Large prominent tree on embankment next to watercourse. Moderate dead wood throughout, large for species. Co-dominant at 3m.	No action.	40+	B1,2	10.2
T14	Norway Maple (*Acer platanoides*)	8.0	550	6.0	6.0	6.0	6.0	1.5/NE	2.0	Good	EM	Good	Field grown tree, surface roots damaged around base of tree. Girdled roots.	No action.	40+	B1,2	6.6

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G15	Pine (*Pinus sp*) Oak (*Quercus sp*) Willow (*Salix sp*) Field Maple (*Acer campestre*)	7.0	220 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of screen planting of mixed species adjacent to highway. Ivy and dense vegetation and also fenced off therefore not fully surveyed. Some windfall evident, minor dead wood throughout.	Full inspection required due to proximity to public highway within 3 months.	20+	B2,3	As plan
G16	Pine (*Pinus sp*) Oak (*Quercus sp*) Willow (*Salix sp*) Field Maple (*Acer campestre*) Birch *(Betula sp)* Ash (*Fraxinus excelsior)*	7.0	220 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of screen planting of mixed species adjacent to highway. Ivy and dense vegetation, and also fenced off therefore not fully surveyed. - Some windfall evident, minor dead wood throughout.	Full inspection required due to proximity to public highway within 3 months.	20+	B2,3	As plan
G17	Pine (*Pinus sp*) Sycamore (*Acer pseudoplatanus*) Willow (*Salix sp*) Field Maple (*Acer campestre*) Birch (*Betula sp.)* Beech (*Fagus sylvatica)* Poplar (*Poplus sp.*) Oak (*Quercus sp.)*	7.0	220 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of screen planting of mixed species adjacent to highway. Ivy and dense vegetation, and also fenced off therefore not fully surveyed. Some windfall evident, minor dead wood throughout.	Full inspection required due to proximity to public highway within 3 months.	20+	B2,3	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G18	Sycamore (*Acer pseudoplatanus*) Willow (*Salix sp*) Pine (*Pinus sp*) Poplar (*Populus sp*) Beech (*Fagus sylvatica)*	12.0	250 Avg	As plan				<1.0/All	<1.0	Good - Dead	Y-SM	Good - Dead	Screen planting mixed species adjacent to highway. Ivy and dense vegetation therefore not fully surveyed. Some windfall evident. Bramble also present.	Full inspection required due to proximity to public highway within 3 months.	20+	B2,3	As plan
H18a	Field Maple (*Acer campestre*)	2.0	200 Avg	As plan				<1.0/All	<1.0	Good	SM	Good	Maintained hedge adjacent to highway. Set back from highway by 3m.	No action.	20+	B2,3	As plan
G19	Sycamore (*Acer pseudoplatanus*) Beech (*Fagus sylvatica*) Oak (*Quercus sp*) Birch (*Betula sp*)	13.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Screen planting mixed species adjacent to highway. Ivy and dense vegetation therefore not fully surveyed. Some windfall evident. Bramble also present.	No action.	20+	B2,3	As plan
G20	Pine (*Pinus sp*) Beech (*Fagus sylvatica*) Oak (*Quercus sp*) Birch (*Betula sp*)	13.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Screen planting mixed species adjacent to highway. Ivy and dense vegetation therefore not fully surveyed. Some windfall evident. Field maple also present. Some bramble and gorse.	No action.	20+	B2,3	As plan
G21	Pine (*Pinus sp*) Beech (*Fagus sylvatica*) Oak (*Quercus sp*) Sycamore (*Acer pseudoplatanus*)	14.0	400 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting mixed species adjacent to highway. Ivy and dense vegetation therefore not fully surveyed. Some windfall evident. Pines along northern edge are semi-mature to early-mature, good specimen trees. Hawthorn hedge line along southern boundary of group.	No action.	20+	B2,3	As plan
T22	Ash (*Fraxinus excelsior*)	6.0	250,250,250	4.0	5.0	3.0	5.0	1.0/N	0.5	Good	SM	Fair	Multi stemmed tree at edge of ditch. Broken branches and previous pruning to clear adjacent field. Minor dead wood. Dense vegetation at base therefore unable to fully inspect.	No action.	20+	C2	5.2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G23	Oak (*Quercus sp*) Ash (*Fraxinus excelsior*)	7.0	380 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM	Good - Fair	Two ash and one oak. Multi stemmed and single stem on edge of ditch. Poor previous pruning to clear adjacent field. Minor dead wood throughout. Prominent on landscape. Dense vegetation at base therefore unable to fully inspect.	No action.	20+	C2,3	As plan
T24	Ash (*Fraxinus excelsior*)	6.0	200	As plan				<1.0/All	<1.0	Fair	Y	Fair	Multi-stemmed tree on edge of ditch, minor dead wood. Dense vegetation at base therefore unable to fully inspect.	No action.	20+	C2	As plan
G25	Ash (*Fraxinus excelsior*)	6.0	280 Avg	As plan				<1.0/All	<1.0	Fair	Y	Fair	Trees on edge of ditch, minor dead wood. Dense vegetation at base therefore unable to fully inspect.	No action.	20+	C2	As plan
T26	Hawthorn (*Crataegus monogyna*)	5.0	200,250,250	2.0	2.0	2.0	2.0	<1.0/All	<1.0	Good	EM	Fair	Multi stemmed tree at edge of ditch. Minor dead wood. Dense vegetation at base therefore unable to fully inspect.	No action.	20+	C2	4.9
T27	Common Oak (*Quercus robur*)	13.0	950	6.0	6.0	6.0	6.0	2.0/S	1.0	Good	M	Good - Fair	Mature field boundary tree, prominent on landscape. Epicormic growths throughout, moderate dead wood and broken branches.	No action.	40+	B1,2,3	11.4
T28	Common Oak (*Quercus robur*)	10.0	950	5.0	5.0	5.0	5.0	2.0/S	1.0	Good - Fair	V	Good - Fair	Veteran field boundary tree, prominent in landscape. Epicormic growths throughout, moderate dead wood and broken branches. Extensive decay at base on north side of main stem extending up to main scaffold limb. Large aerial dead wood, stubs and rot pockets.	No action.	40+	A1,2,3	11.4
T29	Common Oak (*Quercus robur*)	10.0	950	6.0	6.0	6.0	6.0	2.0/S	1.5	Good - Fair	M	Good - Fair	Mature field boundary tree, prominent on landscape. Epicormic growths throughout and broken branches. Basal decay, bulging at base of tree. Minor to moderate dead wood throughout.	No action.	40+	A1,2,3	11.4
T30	Common Oak (*Quercus robur*)	4.0	200,200,200	1.5	1.5	1.5	1.5	<1.0/All	<1.0	Good - Fair	SM	Fair	Prominent on the landscape, part of field boundary hedge.	No action.	20+	C1,2,3	4.2
T31	Common Oak (*Quercus robur*)	11.0	900	8.0	8.0	8.0	8.0	2.0/S	5.0	Good	M	Good	Prominent tree on the landscape, field boundary. Lifted on northern side to maintain clearance over adjacent field. Canopy clearance is 2m on southern side. Basal decay, stubs, and epicormic growths throughout	No action.	40+	A2,3	10.8
T32	Common Oak (*Quercus robur*)	14.0	950	9.0	9.0	9.0	9.0	2.0/E	3.0	Good	M	Good	Prominent tree on the landscape, field boundary. Lifted on northern side to maintain clearance over adjacent field. Canopy clearance is 2m on southern side. Large cavity at crown break at 4m. Moderate dead wood and epicormic growths throughout. Stubs.	No action.	40+	A2,3	11.4

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
W33	Oak (*Quercus sp*) Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*)	16.0	350 Avg	As plan				<1.0/All	<1.0	Good - Poor	Y-M	Fair - Poor	Small woodland with varying age range of trees. Bramble undergrowth. Various notable mature trees within the group. Moderate dead wood throughout, ivy and epicormic growths.	No action.	40+	B2,3	As plan
T34	Common Oak (*Quercus robur*)	16.0	1000	7.0	7.0	7.0	7.0	5.0/NE	4.0	Good	M	Good - Fair	Prominent tree on the landscape, located on the northern edge of small woodland (W33). Moderate dead wood throughout. Epicormic growths throughout and stubs. Lean to the north east.	No action.	40+	B2,3	12.0
T35	Common Oak (*Quercus robur*)	16.0	950	7.0	7.0	7.0	7.0	3.0/N	1.0	Good	M	Good - Fair	Prominent tree on the landscape, located on the northern edge of small woodland (W33). Moderate dead wood throughout. Epicormic growths throughout and stubs.	No action.	40+	B2,3	11.4
T36	Common Oak (*Quercus robur*)	17.0	1100	7.0	7.0	7.0	7.0	6.0/NW	3.0	Good	M	Good - Fair	Prominent tree on the landscape, located on the northern edge of small woodland (W33). Moderate dead wood throughout. Epicormic growths throughout and stubs. Main limb failure on north west side at 2.5m.	No action.	40+	A1,2,3	13.2
T37	Sycamore (*Acer pseudoplatanus*)	4.0	140	1.0	1.0	1.0	1.0	<1.0/All	1.0	Good	Y	Good	Self-seeded boundary tree.	No action.	20+	C2	1.7
G38	Sycamore (*Acer pseudoplatanus*)	15.0	400 Avg	As plan				2.0/All	3.0	Good	SM-EM	Good - Fair	Prominent line of boundary trees, some with excessive ivy. Minor dead wood. Historic pruning wounds on main stem to maintain clearance over adjacent access road.	Remove ivy to allow full inspection within 6 months.	40+	B2,3	As plan
T39	Sycamore (*Acer pseudoplatanus*)	4.0	450	4.0	4.0	4.0	4.0	2.0/E	5.0	Good	SM	Good	Prominent tree in private garden behind boundary hedge and wall. Damage to underside of branches overhanging access road to the south. Poor previous pruning to clear adjacent road. Broken branches.	No action.	20+	B2	5.4
G40	Sycamore (*Acer pseudoplatanus*) Willow (*Salix sp.*) Hawthorn (*Crataegus monogyna*)	11.0	400 Avg	As plan				2.0/All	5.0	Good - Poor	SM-EM	Good - Poor	Prominent boundary trees adjacent to highway. The willows have historically been pollarded. Some are now in poor structural condition with decay on various willows at historic pruning points. Poor pruning on most trees, one sycamore is heavily clad in ivy.	Further inspection of decay areas required due to proximity to public highway within 3 months.	20+	C2,3	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
H40a	Hawthorn (*Crataegus monogyna*)	6.0	250 Avg	As plan				<1.0/All	<1.0	Good - Fair	EM-M	Good - Poor	Old field boundary hedge on ditch edge. Dense ivy and minor dead wood.	No action.	20+	C2,3	As plan
G41	Hawthorn (*Crataegus monogyna*)	4.0	200 Avg	As plan				<1.0/All	<1.0	Good - Fair	EM-M	Good - Poor	Old field boundary hedge on ditch edge. Minor dead wood.	No action.	20+	C2,3	As plan
T42	False acacia (*Robinia pseudoacacia*)	10.0	550,700,550,400	7.0	7.0	7.0	7.0	2.0/E	<1.0	Fair	M	Poor	Multi stemmed tree in process of major failure. Decay at base of tree, partial failure has already occurred on southern co-dominant stem. Dead wood throughout, high habitat potential. Prominent in landscape.	No action.	10+	C2,3	13.4
G43	Hawthorn (*Crataegus monogyna*) Elder (*Sambucus nigra*)	4.0	250 Avg	As plan				<1.0/All	<1.0	Good - Fair	EM-M	Good - Poor	Old field boundary hedge on ditch edge. Minor dead wood. Decay pockets on several trees.	No action.	20+	C2,3	As plan
G44	Hawthorn (*Crataegus monogyna*)	4.0	250 Avg	As plan				<1.0/All	<1.0	Good - Fair	EM-M	Good - Poor	Old field boundary hedge on ditch edge. Minor dead wood. Decay pockets on several trees.	No action.	20+	C2,3	As plan
G45	Blackthorn (*Prunus spinosa*) Cypress (*Chamaecyparis sp*) Field Maple (*Acer campestre*)	11.0	300 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Poor	Road side group forming a screen to adjacent highway. Minor dead wood throughout. .	No action.	20+	C2,3	As plan
T46	Common Oak (*Quercus robur*)	11.0	800	3.0	4.0	6.0	4.0	2.0/E	4.5	Good	M	Good - Fair	Prominent on landscape. Located on edge of ditch. Severely lifted on eastern side (canopy clearance in excess of 5m on this side), large pruning wounds on main stem and minor dead wood.	No action.	20+	B2,3	9.6
T47	Common Oak (*Quercus robur*)	11.0	850	3.0	5.0	6.0	5.0	2.0/E	4.0	Good	M	Good - Fair	Prominent on landscape. Located on edge of ditch. Severely lifted on eastern side (canopy clearance in excess of 5m on this side), large pruning wounds on main stem and minor dead wood.	No action.	20+	B2,3	10.2
T48	Common Oak (*Quercus robur*)	6.0	500	4.0	4.0	4.0	4.0	2.0/N	5.0	Good	EM	Good - Fair	Prominent on landscape. Located on edge of ditch, poor previous pruning to clear adjacent track. Minor dead wood and epicormic growths.	No action.	20+	C2,3	6.0

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
T49	Common Oak (*Quercus robur*)	10.0	900	8.0	8.0	8.0	8.0	2.0/N	2.0	Good	M	Good	Prominent on landscape. Located on edge of ditch, poor previous pruning to clear adjacent track. Cavity on main stem at 2m, minor dead wood and epicormic growths throughout.	No action.	40+	B2,3	10.8
T50	Common Oak (*Quercus robur*)	10.0	900	3.0	3.0	5.0	3.0	1.0/E	4.0	Good	EM	Good - Fair	Prominent on landscape. Located on edge of field adjacent to access road. Poor previous pruning to clear adjacent track, flail damage to north and south side of canopy with minor dead wood.	No action.	20+	C2,3	10.8
G51	Pine (*Pinus sp*) Oak (*Quercus sp*) Sycamore (*Acer pseudoplatanus*) Poplar (*Populus sp*)	14.0	350 Avg	As plan				<1.0/All	<1.0	Good - Poor	Y-SM	Good - Poor	Screen planting surrounding rail line. Some standing dead wood, minor to moderate dead wood throughout. Small understory of gorse and holly.	No action.	20+	B2,3	As plan
G52	Cherry Laurel (*Prunus laurocerasus*) Birch (*Betula sp*) Field Maple (*Acer campestre*) Holly (*Ilex aquifolium*) Willow (*Salix sp.*)	15.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting surrounding rail line, minor dead wood throughout. Small managed field maple hedge running along northern edge of group. Gabion wall in middle of grouping running the length of group.	No action.	20+	C2,3	As plan
G53	Alder (*Alnus sp*) Poplar (*Populus sp*) Beech (*Fagus sylvatica*) Birch (*Betula sp*)	14.0	350 Avg	As plan				<1.0/All	<1.0	Good - Poor	Y-M	Good - Poor	Screen planting surrounding rail line. Maintained hawthorn hedge along northern edge of group. Mature line of field maple also running along northern edge of group. Water course running between northern edge and rail line. Minor to moderate dead wood throughout. Some standing dead wood within the group.	No action.	40+	B1,2,3	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G54	Oak (*Quercus sp*) Wild Cherry (*Prunus avium*) Norway Maple (*Acer platanoides*) Birch (*Betula sp*)	14.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting surrounding rail line. Poplar, alder and pines also present. Minor dead wood throughout.	No action.	40+	B1,2,3	As plan
G55	Pine (*Pinus sp*) Birch (*Betula sp*) Norway Maple (*Acer platanoides*)	15.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting surrounding rail line. Old planting guards left within the group. Minor dead wood throughout. - Scots pines along edge facing rail line.	No action.	40+	B1,2,3	As plan
G56	Norway Maple (*Acer platanoides*) Pine (*Pinus sp.*) Alder (*Alnus sp.*)	10.0	280 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Screen planting surrounding rail line. Minor to moderate dead wood throughout, small amount of standing dead wood.	No action.	20+	C2	As plan
G57	Pine (*Pinus sp.*) Birch (*Betula sp.*) Sycamore (*Acer pseudoplatanus*) Norway Maple (*Acer platanoides*) Alder (*Alnus sp.*)	17.0	380 Avg	As plan				<1.0/All	<1.0	Good - Poor	Y-EM	Good - Poor	Screen planting surrounding rail line. Minor to moderate dead wood throughout, small amount of standing dead wood and on the ground. Elder also present.	No action.	40+	B1,2,3	As plan
G58	Alder (*Alnus sp.*) Norway Maple (*Acer platanoides*)	14.0	300 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting surrounding rail line. Minor to moderate dead wood throughout, small amount of standing dead wood and on the ground.	No action.	20+	C2,3	As plan
G59	Alder (*Alnus sp.*) Willow (*Salix sp.*)	7.0	200 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Self-seeded trees growing amongst redundant pipeline.	No action.	20+	C2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G60	Larch (*Larix sp.*) Alder (*Alnus sp.*) Birch (*Betula sp.*) Hawthorn (*Crataegus monogyna*)	9.0	250 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of trees growing adjacent to access road.	No action.	20+	C2	As plan
G61	Alder (*Alnus sp.*) Hazel (*Corylus avellana*) Pine (*Pinus sp.*)	11.0	280 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Unmanaged group of trees running adjacent to old rail sidings and bund area.	No action.	20+	C2,3	As plan
G62	Pine (*Pinus sp.*) Alder (*Alnus sp.*) Birch (*Betula sp.*) Sweet Chestnut (*Castanea sativa*)	17.0	320 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Screen planting surrounding site boundary.	No action.	20+	B2,3	As plan
T63	Alder (*Alnus sp.*)	12.0	450,300	5.0	5.0	5.0	5.0	<1.0/All	<1.0	Good	EM	Good - Fair	Self-seeded tree adjacent to drainage ditch.	No action.	20+	C2	6.5
G64	Alder (*Alnus sp.*)	6.0	160 Avg	As plan				<1.0/All	<1.0	Good	Y	Good - Fair	Self-seeded trees adjacent to boundary fence.	No action.	20+	C2	As plan
G65	Goat Willow (*Salix caprea*)	6.0	250 Avg	As plan				<1.0/All	<1.0	Fair	Y-SM	Fair	Self-seeded trees adjacent to boundary fence.	No action.	20+	C2	As plan
G66	Willow (*Salix sp.*) Birch (*Betula sp.*)	6.0	250 Avg	As plan				<1.0/All	<1.0	Fair	Y-SM	Fair	Self-seeded trees adjacent to boundary fence and redundant pipeline.	No action.	20+	C2	As plan
G67	Elm (*Ulmus sp.*) Hawthorn (*Crataegus monogyna*)	7.0	300 Avg	As plan				<1.0/All	<1.0	Fair - Dead	Y-SM	Fair - Dead	Group of trees adjacent to oil pipeline and rail line, high percentage are either dying or dead.	Fell dead and dying trees immediately.	<10	U	N/A
G68	Elm (*Ulmus sp.*) Blackthorn (*Prunus spinosa*)	5.0	250 Avg	As plan				<1.0/All	<1.0	Fair - Dead	Y-SM	Fair - Dead	Group of small trees with high percentage of dead or dying which requires removal, adjacent to rail line and stores area.	Fell dead and dying trees immediately.	10+	C2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G69	Birch (*Betula sp.*) Alder (*Alnus sp.*) Norway Maple (*Acer platanoides*)	10.0	350 Avg	As plan				<1.0/All	<1.0	Good - Dead	Y-SM	Good - Dead	Tight unions, minor to major dead wood throughout - majority of semi-mature trees are Norway maples. Multi stemmed at base.	No action.	40+	B2,3	As plan
G70	Norway Maple (*Acer platanoides*) Alder (*Alnus sp.*)	11.0	300 Avg	As plan				<1.0/All	<1.0	Good - Dead	Y-EM	Good - Dead	Tight unions, minor to major dead wood throughout - majority of semi-mature trees are Norway maples. Multi stemmed at base.	No action.	40+	B2,3	As plan
G71	Norway Maple (*Acer platanoides*) Alder (*Alnus sp.*) Hawthorn (*Crataegus monogyna*)	12.0	300 Avg	As plan				<1.0/All	<1.0	Good - Dead	Y-EM	Good - Dead	Tight unions, minor to major dead wood throughout - majority of semi-mature trees are Norway maples. Multi stemmed at base.	No action.	40+	B2,3	As plan
G72	Birch (*Betula sp.*) Pine (*Pinus sp.*)	9.0	300 Avg	As plan				<1.0/All	<1.0	Good	SM	Good - Fair	Trees located adjacent to access road and office building. Birch is twin stemmed at 0.5m. Poor previous pruning to birch.	No action.	20+	C2	As plan
G73	Hawthorn (*Crataegus monogyna*)	7.0	200 Avg	As plan				<1.0/All	<1.0	Good	SM	Good	Located in bed adjacent to highway and building.	No action.	20+	B2	As plan
G74	Hawthorn (*Crataegus monogyna*)	7.0	200 Avg	As plan				<1.0/All	<1.0	Good	SM	Good	Located in bed adjacent to highway and building - poor previous pruning.	No action.	20+	B2	As plan
G75	Wild Cherry (*Prunus avium*)	7.0	300 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good	Located in bed adjacent to highway and building and main entrance to site, prominent - poor previous pruning.	No action.	20+	C2	As plan
G76	Cypress (*Chamaecyparis sp.*) Lime (*Tilia sp.*) Cherry (*Prunus sp.*)	9.0	350 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good	Located in bed adjacent to highway prominent - poor previous pruning, several commemorative trees within this group.	No action.	20+	B2	As plan
G77	Holly (*Ilex aquifolium*)	7.0	250 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good	Located in bed adjacent to access road, prominent trees.	No action.	20+	B2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G78	Pine (*Pinus sp.*) Willow (*Salix sp.*) Alder (*Alnus sp.*)	10.0	300 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good - Fair	Screen planting on site boundary.	No action.	20+	B2,3	As plan
G79	Willow (*Salix sp.*) Pine (*Pinus sp.*)	5.0	250 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Fair - Poor	Multi stemmed trees on boggy ground. Dense vegetation therefore unable to fully inspect.	No action.	20+	C2,3	As plan
G80	Pine (*Pinus sp.*)	8.0	300 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good	Screen planting on site boundary.	No action.	20+	B2,3	As plan
G81	Norway Maple (*Acer platanoides*) Poplar (*Populus sp.*)	12.0	350 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good - Fair	Screen planting on site boundary. Some basal mechanical damage, minor dead wood. Prominent trees at site entrance adjacent to highway.	No action.	20+	B2,3	As plan
G82	Holly (*Ilex aquifolium*) Blackthorn (*Prunus spinosa*)	6.0	200 Avg	As plan				<1.0/All	<1.0	Good	Y-SM	Good - Fair	Screen planting on site boundary. Prominent trees at site entrance adjacent to highway. Dense vegetation therefore unable to fully inspect.	No action	20+	C2,3	As plan
H83	Hawthorn (*Crataegus monogyna*) Blackthorn (*Prunus spinosa*)	2.0	180 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Screen planting on site boundary. Managed.	No action.	20+	B2,3	As plan
T84	Hybrid black poplar (*Populus x canadensis*)	12.0	400	4.0	4.0	4.0	4.0	3.0/E	3.0	Good	SM	Good - Fair	Prominent tree adjacent to access road entrance and highway - secondary limb at 0.5m dying back.	No action.	20+	C2	4.8
G85	Cherry (*Prunus sp.*) Blackthorn (*Prunus 35pinose*) Poplar (*Populus sp.*) Holly (*Ilex aquifolium*)	11.0	300 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good – Fair	Screen planting on site boundary. Dense vegetation therefore unable to fully inspect – some trees with dense ivy.	No action.	20+	B2,3	As plan
T86	Birch (*Betula sp.*)	11.0	300	4.0	4.0	4.0	4.0	2.0/W	3.0	Good	SM	Good – Fair	Prominent tree adjacent to access road entrance and highway – dense vegetation therefore unable to fully inspect.	No action.	20+	B1,2	3.6

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G87	Willow (*Salix sp.*)	6.0	250 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good – Fair	Screen planting on site boundary adjacent to access road and boundary fence. Multi-stemmed trees at base.	No action.	20+	C2	As plan
G89	Pine (*Pinus sp.*) Hawthorn (*Crataegus monogyna*) Japanese Maple (*Acer palmatum*) Birch (*Betula sp.*)	12.0	350 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good – Fair	Screen planting around lagoon .Adjacent to highway and boundary fence. Generally pines are concentrated on top of banking around the lagoon. Other species drop down to the water's edge.	No action.	20+	B2,3	As plan
G90	Scots Pine (*Pinus sylvestris*) Alder (*Alnus sp.*) Norway Maple (*Acer platanoides*) Ash (*Fraxinus excelsior*)	14.0	300 Avg	As plan				<1.0/All	<1.0	Good	SM-M	Good – Fair	Screen planting adjacent to access road and boundary fence. Minor to moderate dead wood throughout.	No action.	20+	B2,3	As plan
G91	Scots Pine (*Pinus sylvestris*) Oak (*Quercus sp.*) Hawthorn (*Crataegus monogyna*) Poplar *(Populus sp.*)	12.0	350 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good – Poor	Screen planting adjacent to rail line and highway to the west. Sporadic vegetation with occasional early-mature oak trees.	No action.	20+	C2,3	As plan
G92	Birch (*Betula sp.*) Norway Maple (*Acer platanoides*) Willow (*Salix sp.*) Hawthorn (*Crataegus monogyna*)	10.0	280 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good – Poor	Screen planting adjacent to rail line. Vegetation is sporadic throughout. Access limited due to steep banking and rail line.	No action.	20+	C2,3	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G93	Pine (*Pinus sp.*)	14.0	300 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good	Prominent large trees adjacent to highway.	No action.	20+	B1,2	As plan
94 to 98 not used																	
T99	Oak (*Quercus sp.*)	9.0	900	9.0	9.0	9.0	9.0	0.5/All	0.5	Good	EM	Good	Prominent tree adjacent visible from highway. Minor to moderate dead wood throughout. topped historically, now has multiple limbs at crown break.	No action.	20+	B1,2	10.8
G100	Sycamore (*Acer pseudoplatanus*) Poplar (*Populus sp.*) Cherry (*Prunus sp.*) Birch (*Betula sp.*)	19.0	350 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Fair	Prominent large trees adjacent to access road. Tight unions, minor to moderate dead wood throughout. - 1m high hawthorn and blackthorn hedge along group edge adjacent to highway, maintained.	No action.	20+	C2	As plan
G101	Pine (*Pinus sp.*) Norway Maple (*Acer platanoides*)	15.0	350 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good	Prominent large trees adjacent to access road. Minor dead wood throughout. Growing on steep embankment.	No action.	20+	B2	As plan
G102	Apple (*Malus sp.*) Cherry (*Prunus sp.*) Birch (*Betula sp.*) Lime (*Tilia sp.*)	6.0	280 Avg	As plan				<1.0/All	<1.0	Good	SM	Good	Prominent trees adjacent to access road. Located on grass embankment.	No action.	20+	B2	As plan
G103	Red Oak (*Quercus rubra*) Holm Oak (*Quercus ilex*)	12.0	350 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good - Fair	Prominent trees adjacent to access road. Located on grass verge, prominent. There are three holm oaks with the remainder being red oak - previous poor pruning wounds on main stem of some trees.	No action.	20+	B2	As plan
G104	Cherry (*Prunus sp.*)	5.0	220 Avg	As plan				<1.0/All	<1.0	Good	SM	Good - Fair	Prominent trees adjacent to access road. Growing on grass verge next to car park entrance - previous poor pruning wounds on main stem of some trees.	No action.	20+	C2	As plan
T105	Lime (*Tilia sp.*)	7.0	300	3.0	3.0	3.0	3.0	2.0/E	4.0	Good	SM	Fair	Prominent tree adjacent visible from highway and car park entrance. poor previous pruning on main stem	No action.	20+	C2	3.6

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G106	Cherry (*Prunus sp*) Hawthorn (*Crataegus monogyna*)	4.0	220 Avg	As plan				<1.0/All	<1.0	Good	SM	Good - Fair	Prominent trees adjacent to access road. Located on grass verge next to car park entrance.	No action.	20+	C2	As plan
T107	Lime (*Tilia sp.*)	7.0	320	3.0	3.0	3.0	3.0	2.0/S	5.0	Good	SM	Fair	Prominent tree adjacent to access road and car park entrance. Poor previous pruning on main stem - potential decay pockets on main stem.	No action.	20+	C2	3.8
G108	Whitebeam species (*Sorbus sp.*) Apple (*Malus sp.*)	4.0	180 Avg	As plan				<1.0/All	<1.0	Good	Y-SM	Good - Fair	Small trees adjacent to access road. Located on grass verge within car park entrance.	No action.	20+	C2	As plan
G109	Whitebeam species (*Sorbus sp.*) Crab Apple (*Malus sylvestris*) Cherry (*Prunus sp.*)	4.0	180 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Fair	Small trees adjacent to access road. Located on grass verge within car park entrance.	No action.	20+	C2	As plan
G110	Birch (*Betula sp.*) Hornbeam (*Carpinus betulus*) Pine (*Pinus sp.*)	8.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Prominent trees adjacent to highway and main access road to the site, located on grass verge.	No action.	20+	B2	As plan
G111	Birch (*Betula sp.*) Oak (*Quercus sp.*) Horse Chestnut (*Aesculus hippocastanum*) Holly (*Ilex aquifolium*)	8.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Prominent trees adjacent to highway and main access road to the site, located on grass verge. Horse chestnuts showing signs of canker. Low, managed hedge running along the north east and eastern boundary of the group.	No action.	20+	B2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G112	Hawthorn (*Crataegus monogyna*) Cypress (*Chamaecyparis sp.*) Cherry (*Prunus sp.*) Norway Maple (*Acer platanoides*)	9.0	300 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of screen planting next to bowling club green. Minor dead wood throughout, upright form, dense planting.	No action.	20+	B2	As plan
H113	Cypress (*Chamaecyparis sp.*) Cherry (*Prunus sp.*) Norway Maple (*Acer platanoides*)	7.0	280 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of screen planting next to bowling club green. Hedge line with occasional tree standards, most with varying degrees of minor dead wood throughout canopy.	No action.	20+	C2	As plan
T114	Common Oak (*Quercus robur*)	9.0	700	5.0	6.0	6.0	6.0	0.5/All	1.0	Good	EM	Good - Fair	Forming part of larger group set within grass field close to site boundary and electricity pylon. Dense ivy and vegetation therefore unable to fully inspect. Crown break at 0.5m, Epicormic growth throughout.	No action.	20+	B2	8.4
G115	Scots Pine (*Pinus sylvestris*) Sycamore (*Acer pseudoplatanus*) Ash (*Fraxinus excelsior*) Whitebeam species (*Sorbus sp.*)	9.0	280 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Fair - Poor	Trees forming part of larger group, dense ivy and vegetation therefore unable to fully inspect. Upright form with minor dead wood.	No action.	20+	C2	As plan
T116	Common Oak (*Quercus robur*)	5.0	200	1.0	1.0	1.0	1.0	1.0/All	1.5	Fair	EM	Fair	Multi-stemmed tree set adjacent to access road on edge of golf course. Poor previous pruning, dense canopy and minor dead wood.	No action.	20+	C2	2.4

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G117	Poplar (*Populus sp.*) Field Maple (*Acer campestre*) Oak (*Quercus sp.*) Sycamore (*Acer pseudoplatanus*)	22.0	800 Avg	As plan				<1.0/All	<1.0	Good - Dead	SM-M	Good - Poor	Line of prominent trees adjacent to access road to site. Set within golf course. Ditch running to the north of the group. Minor dead wood throughout, upright form.	No action.	20+	B2	As plan
G118	Ash (*Fraxinus excelsior*) Holly (*Ilex aquifolium*) Sycamore (*Acer pseudoplatanus*)	20.0	550 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-M	Good - Poor	Line of prominent trees adjacent to access road to site. Set adjacent to cricket pitch. Ditch running to the north of the group - one large ash is leaning south west towards the access road. Poor pruning historically. One sycamore is heavily leaning north east towards the cricket pitch. Another sycamore is ivy clad with evidence of decay at the base. Historically co-dominant stem at base has failed, resulting in decay at base of tree. The two sycamore trees appear precarious on the edge of a ditch, potential to fail is significant in the long term given the issues noted.	Regular monitoring of the two sycamore trees every 12 months to assess structural integrity.	20+	C2	As plan
G119	Red Oak (*Quercus rubra*)	19.0	450 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good	Group of prominent trees adjacent to access road to site. Some basal mechanical damage evident. Minor dead wood throughout. Small hangers present.	No action.	20+	B2	As plan
G120	Red Oak (*Quercus rubra*) Sycamore (*Acer pseudoplatanus*)	19.0	450 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Group of prominent trees adjacent to access road to site. Some basal mechanical damage evident. Minor to moderate dead wood throughout. The only sycamore has tight unions at base and is growing directly next to telephone pole and lines. Ground out stump at south eastern corner of group hence sparse canopy growth in area on immediately adjacent trees.	Regular monitoring of the sycamore tree every 12 months to assess structural integrity.	20+	B2	As plan
G121	Ash (*Fraxinus excelsior*) Red Oak (*Quercus rubra*)	19.0	400 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-EM	Good - Poor	Group of prominent trees adjacent to access road to site and highway. Minor dead wood throughout. Telephone lines within canopy of trees.	No action.	20+	B2	As plan
T122	Ash (*Fraxinus excelsior*)	14.0	250	1.5	1.5	1.5	1.5	3.0/W	7.0	Fair	SM	Poor	Single stem tree adjacent to highway and access road, part of larger group. Significant decay on the main stem at 5m, top showing signs of die back.	Fell within 6 months.	<10	U	N/A

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G123	Sycamore (*Acer pseudoplatanus*)	16.0	550 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-M	Good - Fair	Group of prominent trees adjacent to access road to site and highway. Most trees are densely clad in ivy therefore unable to fully inspect. Minor dead wood throughout. Telephone lines within canopy of trees. Poor previous pruning. Larger trees are located on edge of ditch.	Severe and remove ivy to allow full inspection within 6 months.	20+	B2	As plan
G124	Sycamore (*Acer pseudoplatanus*) Ash (*Fraxinus excelsior*) Hawthorn (*Crataegus monogyna*)	19.0	600 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-M	Good - Fair	Group of prominent trees adjacent to access road to site and visible to highway. One large ash tree located within the group has dense ivy on the main stem. Poor previous pruning, Minor to moderate dead wood throughout, hanger in canopy of ash tree. Historic tear out on the ash tree at 5m, decay evident. Younger trees are multi stemmed at base. All trees are located on edge of ditch.	Sever and remove ivy to allow full inspection within 6 months.	20+	B2	As plan
G125	Field Maple (*Acer campestre*) Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*)	15.0	550 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-M	Good - Fair	Trees adjacent to cricket pitch and golf course located on edge of ditch. Poor previous pruning, visible to highway.	No action.	20+	B2	As plan
T126	Elder (*Sambucus nigra*)	7.0	200	0.5	0.5	0.5	0.5	N/A	7.0	Dead	SM	Dead	Located on edge of ditch within larger group.	Fell asap	<10	U	N/A
T127	Sycamore (*Acer pseudoplatanus*)	22.0	1000	9.0	11.0	8.0	11.0	4.0/N	2.0	Good	M	Good - Fair	Large tree located on edge of ditch within larger group. Multi-stemmed at 2m, multiple stubs throughout the tree, poor previous pruning. Minor to moderate dead wood throughout. Prominent to the landscape.	No action.	40+	B1,2	12.0
G128	Beech (*Fagus sylvatica*) Sycamore (*Acer pseudoplatanus*)	18.0	800 Avg	As plan				<1.0/All	<1.0	Good	EM-M	Good - Fair	Located on verge adjacent to access road entrance and highway. Prominent trees. Dense vegetation and ivy therefore unable to fully inspect. Sycamore has co dominant stems at 4m. Union is obscured by ivy and needs closer inspection. Both trees are on the edge of a ditch.	Severe and remove ivy to allow full inspection within 6 months.	20+	B2	As plan
T129	Sycamore (*Acer pseudoplatanus*)	15.0	850	7.0	7.0	7.0	7.0	2.0/S	5.0	Good	M	Good - Fair	Large tree located adjacent to highway. Crown break at 2m, poor previous pruning. Minor dead wood throughout. Ivy in canopy. Prominent tree.	Severe and remove ivy to allow full inspection within 6 months.	20+	B1,2	10.2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
T130	Sycamore (*Acer pseudoplatanus*)	11.0	420	2.0	2.0	2.0	2.0	N/A	5.0	Dead	SM	Dead	Dead tree located adjacent to highway.	Fell asap.	<10	U	N/A
T131	Elm (*Ulmus sp.*)	7.0	280,280	0	0	3.0	0	N/A	5.0	Poor	SM	Poor	Tree located adjacent to highway suppressed by beech and heavily leaning towards highway - multi stemmed at base, heavily clad in ivy.	Fell asap.	<10	U	N/A
T132	Elm (*Ulmus sp.*)	14.0	450,280	4.5	4.5	4.5	4.5	2.0/W	5.0	Good - Fair	SM	Good - Fair	Tree located adjacent to highway, heavily clad in ivy therefore unable to fully inspect. Minor to moderate dead wood throughout.	Severe and remove ivy to allow full inspection within 6 months.	20+	B2	6.4
G133	Sweet Chestnut (*Castanea sativa*) Norway Maple (*Acer platanoides*) Birch (*Betula sp.*) Sycamore (*Acer pseudoplatanus*)	16.0	600 Avg	As plan				<1.0/All	<1.0	Good - Dead	Y-EM	Good - Dead	Located in private field adjacent to access road entrance and highway. Prominent.trees. Dense vegetation and ivy therefore unable to fully inspect all trees. Fallen *Sorbus sp.* resting in adjacent sweet chestnut which is very close to highway. Birch is leaning towards highway. Minor to moderate dead wood throughout and over highway.	Remove dead wood over highway and dead tree asap.	20+	B2	As plan
G134	Poplar (*Populus sp.*) Sycamore (*Acer pseudoplatanus*) Cherry (*Prunus sp.*)	18.0	600 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Prominent trees adjacent to access road and highway at Western edge of group. 1m high hawthorn and blackthorn hedge along group edge adjacent to access road, maintained. Some windfall evident in group.	Remove dead wood over highway asap.	20+	B2	As plan
G135	Poplar (*Populus sp.*) Sycamore (*Acer pseudoplatanus*)	18.0	600 Avg	As plan				<1.0/All	<1.0	Good - Poor	Y-EM	Good - Poor	Prominent trees screening adjacent rail line.	No action.	20+	B2	As plan
G136	Poplar (*Populus sp.*) Hawthorn (*Crataegus monogyna*)	18.0	600 Avg	As plan				<1.0/All	<1.0	Good - Poor	SM-EM	Good - Poor	Prominent trees screening adjacent rail line.	No action.	20+	B2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G137	Poplar (*Populus sp.*) Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*)	12.0	350 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-EM	Good - Fair	Prominent trees screening adjacent rail line. Section below over-head power lines has been topped historically as part of management regime.	No action.	20+	C2	As plan
G138	Hawthorn (*Crataegus monogyna*) Sycamore (*Acer pseudoplatanus*)	5.0	250 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Prominent trees screening adjacent rail line.	No action.	20+	C2	As plan
G139	Alder (*Alnus sp.*)	8.0	200 Avg	As plan				<1.0/All	<1.0	Good	Y	Good	Young trees.	No action.	20+	C2	As plan
G140	Common Oak (*Quercus robur*)	14.0	900 Avg	As plan				2.5/N	3.0	Good	M	Good	Prominent field boundary trees adjacent to highway. Minor to major dead wood, burrs, torn branches and epicormic growth throughout.	No action.	40+	A1,2,3	As plan
G140a	Hawthorn (*Crataegus monogyna*)	5.0	200 Avg	As plan				<1.0/All	<1.0	Good	EM	Good	Dense group of trees	No action.	20+	C2	As plan
G141	Hawthorn (*Crataegus monogyna*) Field Maple (*Acer campestre*)	10.0	400 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Prominent field boundary trees adjacent to highway. Multi-stemmed trees with minor deadwood.	No action.	20+	B2,3	As plan
G142	Oak (*Quercus sp.*) Willow (*Salix sp.*) Hawthorn (*Crataegus monogyna*) Ash (*Fraxinus excelsior*)	10.0	400 Avg	As plan				<1.0/All	3.0	Good	Y-EM	Good - Fair	Field boundary trees. Minor dead wood, multi-stemmed trees on edge of ditch. Poor previous pruning to clear adjacent field, ivy throughout.	No action.	20+	C2,3	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G143	Ash (*Fraxinus excelsior*) Willow (*Salix sp.*) Sycamore (*Acer pseudoplatanus*)	11.0	450 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Field boundary trees. Minor dead wood, trees on edge of ditch. Poor previous pruning to clear adjacent field. Ivy covering trees therefore unable to fully inspect.	No action.	20+	C2,3	As plan
G143	Poplar (*Populus sp.*) Willow (*Salix sp.*) Sycamore (*Acer pseudoplatanus*)	10.0	400 Avg	As plan				<1.0/All	<1.0	Good	Y-EM	Good - Fair	Field boundary trees. Minor dead wood, trees on edge of ditch. Poor previous pruning to clear over-head power lines and adjacent field.	No action.	20+	C2,3	As plan
T144	Willow *(Salix sp.)*	16.0	1100	10.0	10.0	10.0	10.0	1.0/S	5.0	Good - Fair	SM	Good - Fair	Tree located at corner of property overhanging adjacent field, heavily clad in ivy at crown break at 1.5m therefore unable to fully inspect. Minor dead wood throughout - poor previous pruning to clear adjacent field.	Sever and remove ivy to allow full inspection within 6 months.	20+	B2	13.2
T145	Willow (*Salix sp.*)	5.0	300	0	3.0	4.0	3.0	1.0/E	1.0	Good - Fair	SM	Fair	Tree located at edge of property overhanging adjacent field. Minor dead wood throughout - poor previous pruning to clear adjacent field.	No action.	20+	C2	3.6
G146	Lombardy Poplar (*Populus nigra 'Italica'*) Cypress (*Chamaecyparis sp.*) Sycamore (*Acer pseudoplatanus*)	22.0	550 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Field boundary trees. Minor dead wood, poor previous pruning to clear adjacent field. Restricted access, on private property therefore unable to fully inspect. Tight unions on poplars.	Full inspection recommended within 6 months due to location.	20+	B2	As plan
T147	Sycamore *(Acer pseudoplatanus)*	10.0	1000	6.0	6.0	6.0	6.0	1.0/S	1.0	Good - Fair	SM	Fair	Tree located at edge of property overhanging access road .Minor dead wood throughout - poor previous pruning with decay pockets on main stem as a result. Multi-stemmed at crown break near base, unable to fully inspect due to restricted access on private property.	Sever and remove ivy to allow full inspection within 6 months.	20+	B2	12.0
T148	Sycamore (*Acer pseudoplatanus*)	8.0	230	2.5	2.5	2.5	2.5	2.0/S	2.0	Good	Y	Fair	Self-seeded tree on edge of access road.	No action.	20+	C2	2.7
T149	Willow (*Salix sp.*)	7.0	230	5.0	5.0	5.0	5.0	2.0/S	2.0	Good	SM	Fair	Multi stemmed tree at edge of field boundary, poor previous pruning to clear adjacent field. Minor dead wood throughout.	No action.	20+	C2	2.7

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G150	Willow (*Salix sp.*) Hawthorn (*Crataegus monogyna*) Oak (*Quercus sp.*)	6.0	280 Avg	As plan				<1.0/All	<1.0	Good	Y-SM	Good - Fair	Field boundary trees screening adjacent highway. Minor dead wood, restricted access behind fence and close to busy highway, therefore unable to fully inspect.	Full inspection recommended within 6 months due to proximity to public highway.	20+	C2,3	As plan
T151	Willow (*Salix sp.*)	7.0	200,200,200200,200	3.0	3.0	3.0	3.0	2.0/S	5.0	Good	SM	Fair	Multi-stemmed tree at edge of field boundary, poor previous pruning to clear adjacent field. Minor dead wood throughout.	Sever and remove ivy to allow full inspection within 6 months.	20+	C2	5.4
T152	Common Oak (*Quercus robur*)	12.0	320	4.0	4.0	4.0	4.0	1.0/NE	1.0	Good	SM	Good	Single stem tree, co-dominant at 4m.	No action.	20+	B1,2	3.8
G153	Willow (*Salix sp*) Hawthorn (*Crataegus monogyna*) Oak (*Quercus sp*) Pine (*Pinus sp*)	7.0	300 Avg	As plan				<1.0/All	<1.0	Good	Y-SM	Good - Fair	Field boundary trees screening adjacent highway. Minor dead wood, restricted access as on steep embankment with dense vegetation and close to busy highway, therefore unable to fully inspect.	Full inspection required within 6 months due to proximity to public highway.	20+	C2,3	As plan
G154	Oak (*Quercus sp*)	11.0	500 Avg	As plan				<1.0/All	<1.0	Good	SM-M	Good - Fair	Field boundary trees, flail damage on field sides, basal mechanical damage, epicormics growths throughout, ivy clad, prominent on landscape.	No action.	20+	B2,3	As plan
G155	Oak (*Quercus sp*) Hazel (*Corylus avellana*) Field Maple (*Acer campestre*)	6.0	250 Avg	As plan				<1.0/All	<1.0	Good	SM-EM	Good - Fair	Remnant of historic field boundary hedge, located on embankment next to ditch. Pruned heavily on field sides.	No action.	20+	C2,3	As plan
G156	Oak (*Quercus sp*) Ash (*Fraxinus excelsior*)	10.0	400 Avg	As plan				<1.0/All	<1.0	Good - Poor	SM-EM	Good - Poor	Remnant of historic field boundary hedge, located on embankment next to ditch. Pruned heavily on field sides. The only ash in the group has severe decay on main stem.	No action.	20+	B2,3	As plan

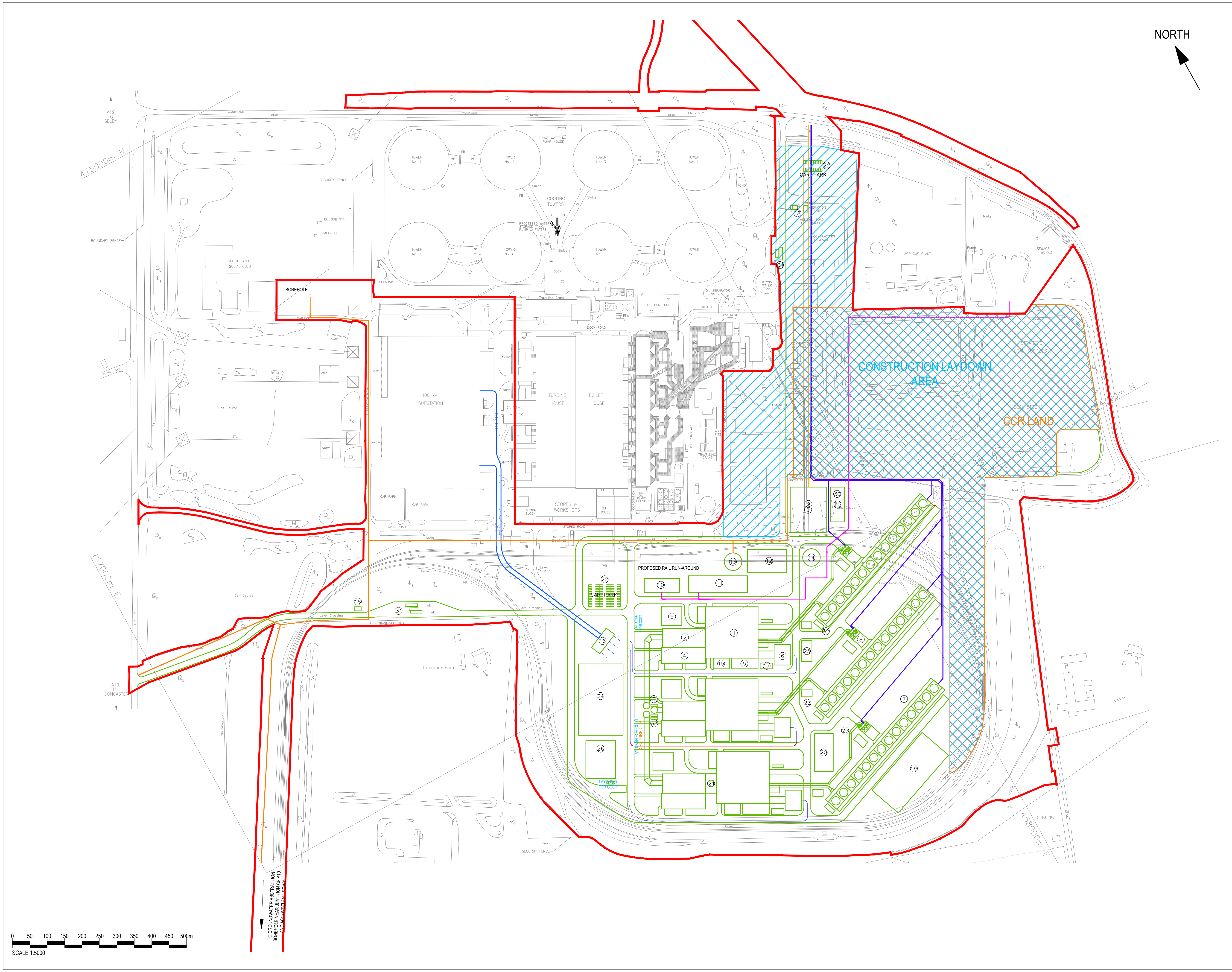
Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G157	Oak (*Quercus sp*) Ash (*Fraxinus excelsior*) Field Maple (*Acer campestre*)	12.0	700 Avg	As plan				<1.0/All	<1.0	Good - Poor	SM-M	Good - Poor	Remnant of historic field boundary hedge, located on embankment next to ditch. - pruned heavily on field sides. The only ash in the group has severe decay on main stem, *Inonotus hispidus* present. One oak is ivy clad therefore unable to fully inspect.	Sever and remove ivy on oak to allow full inspection within 6 months.	20+	B2,3	As plan
T158	Sycamore (*Acer pseudoplatanus*)	7.0	250	3.0	3.0	3.0	3.0	1.5/N	1.0	Good	SM	Fair	Single stem tree on field boundary next to ditch. Severely pruned on field sides, stubs and minor dead wood.	No action.	20+	C2	3.0
T159	Ash (*Fraxinus excelsior*)	7.0	400	5.0	5.0	5.0	5.0	2.0/N	5.0	Good	SM	Poor	Single stem tree on field boundary next to ditch. Severely pruned on field sides, stubs and minor to moderate dead wood. Severe basal decay and major die back on co dominant leader.	No action.	20+	C2,3	4.8
H160	Hawthorn (*Crataegus monogyna*) Field Maple (*Acer campestre*)	5.0	300	As plan				n/a	<1.0	Good - Fair	SM-M	Good - Fair	Unmanaged hedge line screening adjacent commercial premises to the west. Occasional field maple standard within the hedge.	No action.	20+	C2,3	As plan
T161	Ash (*Fraxinus excelsior*)	7.0	250	3.0	3.0	2.5	3.0	2.0/S	5.0	Good	SM	Good	Single stem tree within hedge. Prominent to the adjacent highway.	Sever and remove ivy up to 1 m from base to allow full inspection within 6 months.	20+	B1,2	3.0
T162	Common Oak (*Quercus robur*)	9.0	480	5.0	5.0	5.0	5.0	2.0/N	1.0	Good	EM	Good	Single stem tree within group, minor dead wood.	No action.	20+	B1,2	5.7
G163	Hawthorn (*Crataegus monogyna*)	2.0	200 Avg	As plan				<1.0/All	<1.0	Good - Fair	SM-M	Good - Fair	Managed hedge line running along boundary of Eggborough power plant. Ditch and verge to the north.	No action.	20+	C2,3	As plan
T164	Sycamore (*Acer pseudoplatanus*)	7.0	200,200,200, 180,180,180, 150,150,140, 140	3.0	3.0	3.0	3.0	1.0/All	1.0	Good	SM	Good - Fair	Multi stem tree, 12 stems from base. On ditch edge adjacent to highway, some broken branches. Suppressed form due to neighbouring oak.	No action.	20+	C2	8.3
T165	Common Oak (*Quercus robur*)	11.0	530	7.0	7.0	7.0	7.0	2.5/E	5.0	Good	EM	Good - Fair	Single stem tree, on ditch edge adjacent to highway. Some broken branches, hanger over highway with minor to moderate dead wood throughout. Canopy clearance on field side less than 1m.	Remove dead wood and hanger within asap.	20+	B1,2,3	6.3

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
T166	Oak (*Quercus sp*)	10.0	420	3.0	2.5	6.0	6.0	2.0/SW	5.0	Fair	SM	Fair	Single stem tree on edge of ditch adjacent to highway. Minor to moderate dead wood throughout, some small hangers. Ivy on main stem. Broken branches.	Remove ivy, dead wood and hangers within 12 months.	20+	C2,3	5.0
G167	Oak (*Quercus sp*)	9.0	300 Avg	As plan				1.0/All	5.0	Good - Fair	SM	Fair	Single stem trees on edge of ditch adjacent to highway. Poor form due to suppressed growth. Broken branches and minor dead wood.	No action.	20+	C2	As plan
T168	Common Oak (*Quercus robur*)	10.0	630	7.0	3.0	7.0	6.0	0.5/N	5.0	Fair	M	Poor	Single stem tree on edge of ditch adjacent to highway. Column of decay extending from base of tree up into the canopy. Sounding hammer used to determine structural integrity of base, a high degree of hollowness was identified. Major dead wood throughout the tree. High habitat potential. Due to its close proximity to public highway, the tree requires removal or to be reduced to a safe height and retained as a monolith.	Fell or monolith within 3 months.	<10	U	7.5
T169	Birch (*Betula sp*)	7.0	180	1.0	1.0	1.0	1.0	0.5/W	0.5	Good	Y	Good	Single stem tree behind fence line, close to highway.	No action.	20+	C1,2	2.1
T170	Ash (*Fraxinus excelsior*)	13.0	350,200,200,350,280	4.0	4.0	4.0	4.0	2.0/S	5.0	Good - Fair	EM	Good - Fair	Multi stemmed tree on edge of ditch adjacent to highway. Broken branches and minor dead wood.	No action.	20+	B2	7.6
G171	Ash (*Fraxinus excelsior*) Blackthorn (*Prunus spinosa*) Hawthorn (*Crataegus monogyna*)	9.0	200 Avg	As plan				<1.0/All	5.0	Good - Fair	SM	Good - Fair	Dense group of trees on edge of ditch adjacent to highway. Ivy clad therefore unable to fully inspect. Multi stemmed at base.	Remove ivy and vegetation within 12 months to allow full inspection.	10+	C2,3	2.4
T172	Ash (*Fraxinus excelsior*)	12.0	400,350,280,250,180,140	4.5	4.5	4.5	4.5	3.0/S	5.0	Good - Fair	EM	Fair	Multi stemmed tree on edge of ditch adjacent to highway. Ivy covering the tree therefore unable to fully inspect. Moderate dead wood over highway.	Remove dead wood within 3 months. Remove ivy within 3 months to allow full inspection	20+	C2	4.8
T173	Norway Maple (*Acer platanoides*)	8.0	380	5.5	5.5	5.5	5.5	1.5/S	0.5	Good	SM	Good	Single stem tree located off site behind fence, no access possible. Co-dominant at 3 m.	No action.	20+	B1,2	4.5
T174	Birch (*Betula sp*)	8.0	200	1.5	1.5	1.5	1.5	0.5/All	0.5	Good	Y	Good	Single stem tree located close to gate and access road.	No action.	20+	B1,2	2.4

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G175	Alder (*Alnus sp*) Birch (*Betula sp*) Ash (*Fraxinus excelsior*) Oak (*Quercus sp*) Hawthorn (*Crataegus monogyna)*	12.0	280 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Group of trees running along both banks of ditch. Dense vegetation therefore unable to fully inspect.	No action.	20+	C2,3	As plan
G176	Alder (*Alnus sp*) Willow (*Salix sp*)	10.0	230 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Good - Fair	Scrubby area of trees adjacent to highway. Dense vegetation therefore unable to fully inspect.	Remove vegetation within 6 months to allow full inspection.	20+	C2	As plan
T177	Birch (*Betula sp*)	16.0	300	2.0	2.0	2.0	2.0	4.0/W	5.0	Good	EM	Good	Single stem tree close to highway.	No action.	20+	B1,2	3.6
G178	Ash (*Fraxinus excelsior*) Oak (*Quercus sp*) Hawthorn (*Crataegus monogyna*)	14.0	350 Avg	As plan				<1.0/All	5.0	Good - Fair	SM	Good - Fair	Small group of trees adjacent to highway. Some multi-stemmed at base. Minor to moderate dead wood over highway and hangers. 5 m clearance over highway.	Remove dead wood within 3 months.	20+	B2	As plan
T179	Sycamore (Acer pseudoplatanus)	13.0	350,350	1.5	5.5	5.5	5.5	2.0/S	2.0	Good	SM	Good - Fair	Managed hedge line running along boundary of Eggborough power plant. ditch and verge to the north	Remove ivy at union to assess integrity within 12 months.	20+	C2	5.9
G180	Hawthorn (*Crataegus monogyna*) Blackthorn (*Prunus spinosa*)	3.5	170 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y-SM	Fair	Group of small trees on edge of ditch, dense vegetation therefore unable to fully inspect.	No action.	10+	C2	As plan

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread				First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Estimated Remaining Contribution	Category	Root Protection Radius (m)
				N	S	E	W										
G181	Willow (*Salix* sp) Oak (*Quercus* sp) Norway Maple (*Acer platanoides*) Hawthorn (*Crataegus monogyna*)	5.0	200 Avg	As plan				<1.0/All	<1.0	Good - Fair	Y	Good - Fair	Young boundary trees on edge of ditch. Dense vegetation therefore unable to fully inspect. Tight unions typical of type of close planting.	No action.	20+	C2	As plan
T182	Ash (Fraxinus excelsior)	14.0	490	9.0	9.0	9.0	9.0	7.0/E	4.0	Good	M	Fair	Prominent tree on edge of ditch adjacent to highway. Bifurcated at 4m, broken branches, and cavities on main stem. Old *Inonotus hispidus* on tertiary limb to the east. Decay at base. Moderate dead wood within canopy. Previous poor pruning to clear adjacent field and highway.	Remove dead wood over highway within 3 months, more detailed inspection of limb with *Inonotus hispidus* over highway within 3 months.	20+	B2,3	5.8

ANNEX C: PROPOSED DEVELOPMENT PLANS



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

	PLANT DESCRIPTION
1	TURBINE HALL
2	HEAT RECOVERY STEAM GENERATOR
3	STACK
4	FEEDWATER PUMP BUILDING
5	ELECTRICAL BUILDING
6	GENERATOR TRANSFORMER
7	HYBRID COOLING TOWERS
8	COOLING WATER PUMPS
9	GAS RECEIVING AREA
10	WORKSHOP & STORES
11	ELECTRICAL, CONTROL ROOM & ADMIN BUILDING
12	WATER TREATMENT PLANT, FIRE PUMPS & LABORATORY
13	RAW & FIRE WATER TANK
14	DEMINERALISED WATER TANKS
15	AIR INTAKE FILTER
16	GAS-INSULATED SUB STATION
17	DIESEL GENERATORS
18	GATEHOUSE
19	SURFACE WATER ATTENUATION SYSTEM (INDICATIVE LOCATION)
20	WASTE WATER TREATMENT PLANT
21	UNUSED
22	CAR PARKING
23	CLOSED CIRCUIT COOLING WATER COOLERS
24	PEAKING PLANT
25	AUXILIARY BOILER
26	BLACK START FACILITY
27	UNUSED
28	UNUSED
29	COOLING WATER DOSING
30	GAS COMPRESSORS
31	WEIGHBRIDGE
32	COOLING WATER ELECTRICAL MODULE
33	CONTINUOUS EMISSIONS MONITORING SYSTEM CONTAINER

KEY

- FOUL DRAINAGE TO WASTE WATER TREATMENT WORKS
- COOLING WATER (MAKE-UP & BLOWDOWN)
- GAS SUPPLY LINE
- TOWNS WATER & BOREHOLE WATER
- UNDERGROUND CABLE
- CONSTRUCTION LAYDOWN AREA
- CARBON CAPTURE READINESS (CCR) LAND

Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

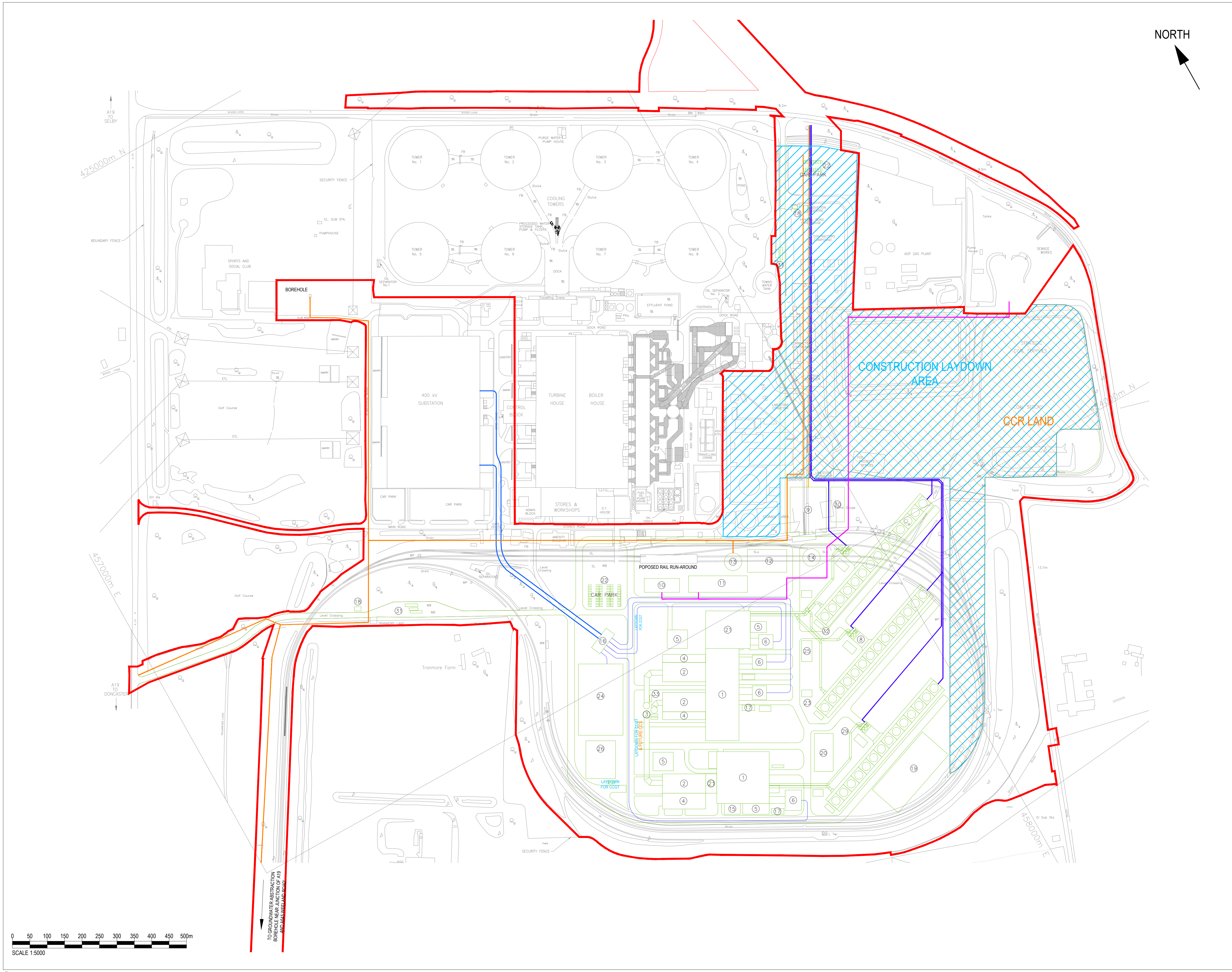
Drawing Title
INDICATIVE CONCEPT LAYOUT (3 SINGLE SHAFT) FOR THE PROPOSED DEVELOPMENT WITHIN THE EXISTING COAL-FIRED POWER STATION SITE

Drawn	Checked	Approved	Date
GB	JW	KC	22/05/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:5000

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
FIGURE 4.1a	01



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

PLANT DESCRIPTION	
1	TURBINE HALL
2	HEAT RECOVERY STEAM GENERATOR
3	STACK
4	FEEDWATER PUMP BUILDING
5	ELECTRICAL BUILDING
6	GENERATOR TRANSFORMER
7	HYBRID COOLING TOWERS
8	COOLING WATER PUMPS
9	GAS RECEIVING AREA
10	WORKSHOP & STORES
11	ELECTRICAL, CONTROL ROOM & ADMIN BUILDING
12	WATER TREATMENT PLANT, FIRE PUMPS & LABORATORY
13	RAW & FIRE WATER TANK
14	DEMINERALISED WATER TANKS
15	AIR INTAKE FILTER
16	GAS-INSULATED SUB STATION
17	DIESEL GENERATORS
18	GATEHOUSE
19	SURFACE WATER ATTENUATION SYSTEM (INDICATIVE LOCATION)
20	WASTE WATER TREATMENT PLANT
21	UNUSED
22	CAR PARKING
23	CLOSED CIRCUIT COOLING WATER COOLERS
24	PEAKING PLANT
25	AUXILIARY BOILER
26	BLACK START FACILITY
27	UNUSED
28	UNUSED
29	COOLING WATER DOSING
30	GAS COMPRESSORS
31	WEIGHBRIDGE
32	COOLING WATER ELECTRICAL MODULE
33	CONTINUOUS EMISSIONS MONITORING SYSTEM CONTAINER

KEY

- FOUL DRAINAGE TO WASTE WATER TREATMENT WORKS
- COOLING WATER (MAKE-UP & BLOWDOWN)
- GAS SUPPLY LINE
- TOWNS WATER & BOREHOLE WATER
- UNDERGROUND CABLE
- CONSTRUCTION LAYDOWN AREA
- CARBON CAPTURE READINESS (CCR) LAND

Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
INDICATIVE CONCEPT LAYOUT (MULTI SHAFT + SINGLE SHAFT) FOR THE PROPOSED DEVELOPMENT WITHIN THE EXISTING COAL-FIRED POWER STATION SITE

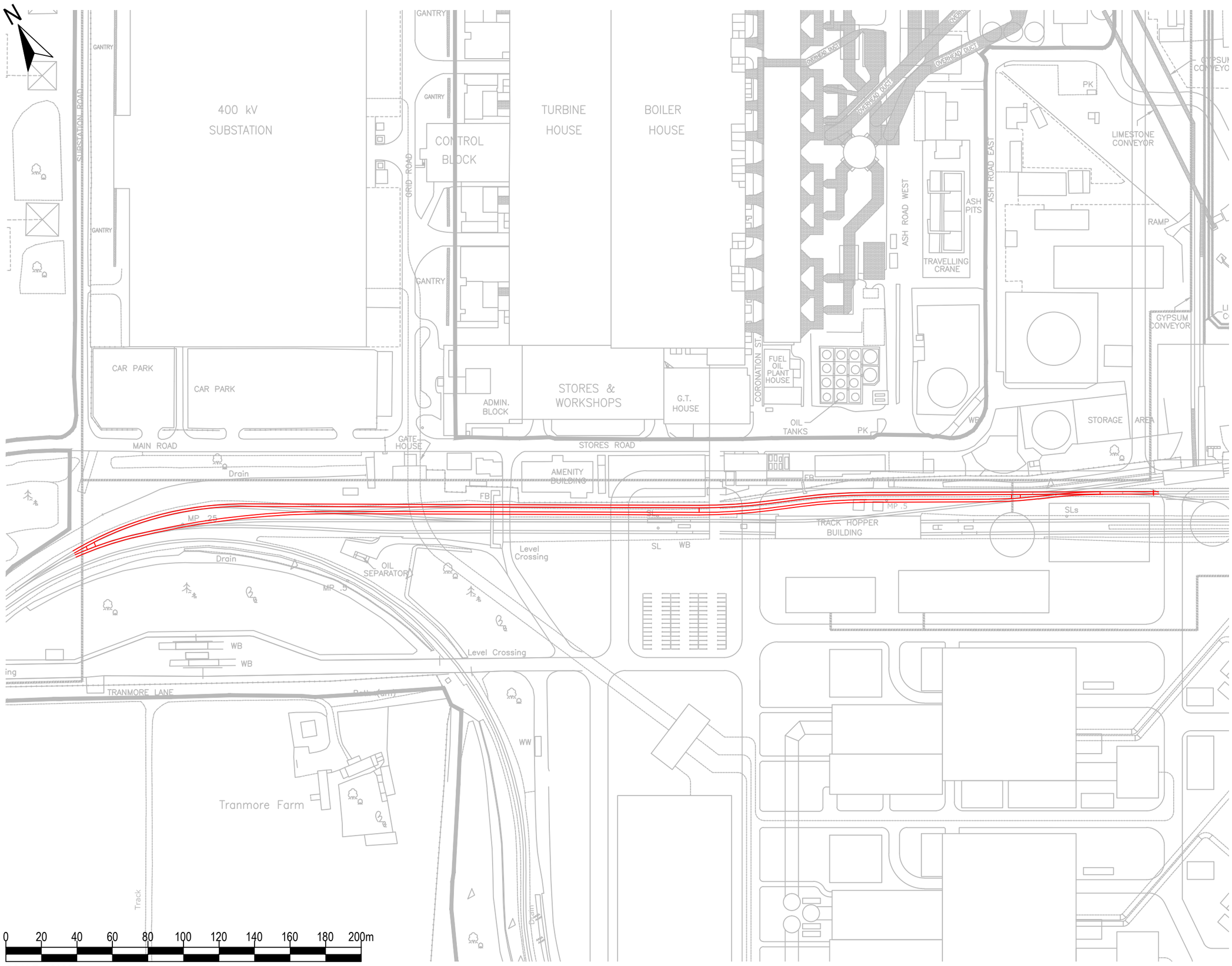
Drawn	Checked	Approved	Date
GB	JW	KC	17/05/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:5000

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

AECOM

Drawing Number	Rev
FIGURE 4.1b	01



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

PROPOSED TRACK ALTERATIONS

Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
INDICATIVE REVISED RAILWAY ACCESS ARRANGEMENT

Drawn	Checked	Approved	Date
SC	RW	KC	31/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2000

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
FIGURE 4.2	01

N

Proposed AGI

Feeder 29

West Lane Access

Gateforth Grange

Paper House Farm

Blossom Hill

Brick Kiln

Burn Lane

Burn Lodge Farm

Burn Lane Farm

Burn Lodge Farm Access (Construction Only)

Whitings Lane Access

Stocking Green Farm

Sewage Works

Lodge Farm

Fox Lane Access

CHAPEL HADDLESEY CP

Bridge Farm

Sch

Croft Farm

MS Chapel Haddlesey

Fox Lane

Millfield Road Access

Weir

NTL

Lock (dis)

River Aire

East View

Temple Drain

Haddlesey Manor

East Haddlesey

Eastfield House Farm

Hall Garths

Goose Hill Reach

Temple Manor

Temple Reach

The Holmes

Eggborough Ings

Ings Lane

Existing Wand Lane Access

Additional Wand Lane Access (Construction Only)

Existing Hensall Gate Entrance

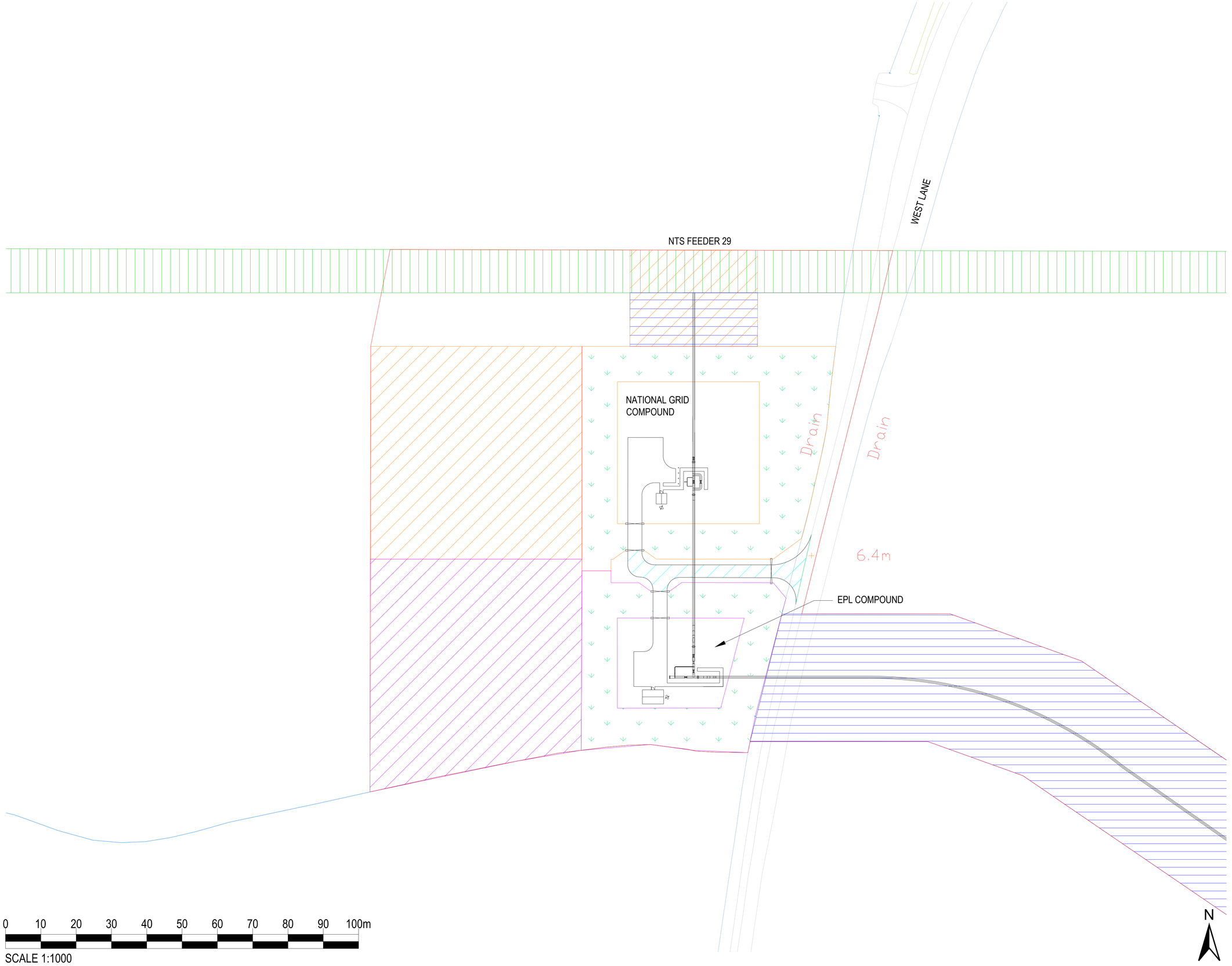
LEGEND

- DCO Application Site
- Potential Access Point
- Gas Connection Route

100 0 100 200 300 400 500 m

Project Title: EGGBOROUGH CCGT DCO	Client: EGGBOROUGH POWER LTD	AECOM Scott House Alençon Link, Basingstoke Hampshire, RG21 7PP Telephone (01256) 310200 Fax (01256) 310201 www.aecom.com
Drawing Title: GAS CONNECTION ROUTE	Drawn: SJ; Checked: JW; Approved: KC Date: 18/05/2017; Scale @ A3: 1:10,000; Purpose of Issue: Environmental Statement	
	Drawing Number: FIGURE 4.3; Rev: 01	

File Name:K:\5004 - Information Systems\60506766_Eggborough_CCGT_DCO\02_Maps\DCO Application\Chapter 4\Figure 4_3 - Gas Connection Route.mxd



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- NATIONAL GRID CONSTRUCTION LAYDOWN AREA
- EPL CONSTRUCTION LAYDOWN AREA
- EXISTING NATIONAL GRID PERMANENT EASEMENT
- PROPOSED 36M CONSTRUCTION CORRIDOR WITHIN WHICH THE 14M PERMANENT EASEMENT WILL BE LOCATED
- PROPOSED PERMANENT ACCESS ROAD
- LANDSCAPE PLANTING
- DCO APPLICATION SITE
- PROPOSED GAS PIPELINE (INDICATIVE ROUTE)

Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
INDICATIVE ABOVE GROUND INSTALLATION LAYOUT

Drawn	Checked	Approved	Date
GB	RW	KC	17/05/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:1000

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
FIGURE 4.4	01

ANNEX D: TREE PROTECTION PLANS

Key to Abbreviations Used in the Survey

Term	Definition		
Age	Classification given in relation to the life expectancy of the species.		
	Y	Young	Usually less than 10 years old
	SM	Semi mature	Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).
	EM	Early mature	Tree in the second third of its normal life expectancy for the species (some potential for future growth in size).
	M	Mature	Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size).
	OM	Over Mature	Tree beyond the normal life expectancy for the species.
	V	Veteran	Tree of interest biologically, aesthetically or culturally because of its condition, size or age.
Avg	Indicates an average representative measured dimension for the group or feature.		
Canopy Spread	Extent of the tree canopy spread, measured in metres on the four compass points and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.		
Category	A	High quality/value 40 years+	
	B	Moderate quality/value 20 years+	
	C	Low quality/value min 10 years/stem diameter less than 150 mm.	
	U	Unsuitable for retention.	
	1	Arboricultural quality/value.	
	2	Landscape quality/value.	
	3	Cultural quality/value (including conservation).	
Condition	Classification given in relation to the life expectancy of the species.		
	G	Good	Normal vitality including leaf size, bud growth, density of crown and wound wood development, and/or no significant structural defects.
	F	Fair	Lower than normal vitality, reduced bud development, reduced crown density, and reduced response to wounds, and/or structural defects which can be resolved via remedial works.

Term	Definition		
	P	Poor	Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species and/or structural defects which cannot be resolved via remedial works.
	D	Dead	Dead
	Fair to Good		Indicates a range of conditions (e.g. within a group)
Crown clearance	The height to the lowest part of the crown, measured in metres and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.		
DBH	Diameter at Breast Height. The diameter of the main stem/s of the tree measured at a height of 1.5m.		
Estimated Height	Height of the tree, measured in metres and recorded to the nearest half metre dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.		
Observations	General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect).		
Preliminary Management Recommendations	Preliminary Management Recommendations are provided irrespective of whether the vegetation concerned will be lost to the proposed development or not. This accords with BS5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'. Amongst other functions, describing such measures ensures that any readily achievable potential value associated with vegetation can be taken into account during subsequent assessment.		
Ref No	Specific identification number given to each tree or group Corresponding number on plan – T=Tree / H=Hedge / G=Group		
Root Protection Area (RPA)	An area which defines the theoretical minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. Measured as the radius of a circle in metres, and total area in square metres.		
Species	Common name followed by botanical name shown in italics		
Stem diameter	Diameter measured in millimetres at 1.5 m above ground level (MS = Multi-stem tree measured in accordance with BS5837:2012)		
#	Dimension estimated due to tree(s), hedgerow(s) etc. not being accessible and preventing accurate measuring.		
##	Indicates the estimated position of a tree (that is not otherwise indicated on a topographical survey) or a value based upon an average of remaining measurements or visual estimate.		
*****	Indicates where it is not possible to determine the extent of growth due to canopies overlapping.		

Considerations

Tree owners/ managers have a legal duty to prevent foreseeable harm. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or gaining further advice as appropriate. This survey is primarily for planning purposes, focusing on the quality and benefits of the trees and is not specifically designed to assess the safety of trees on site.

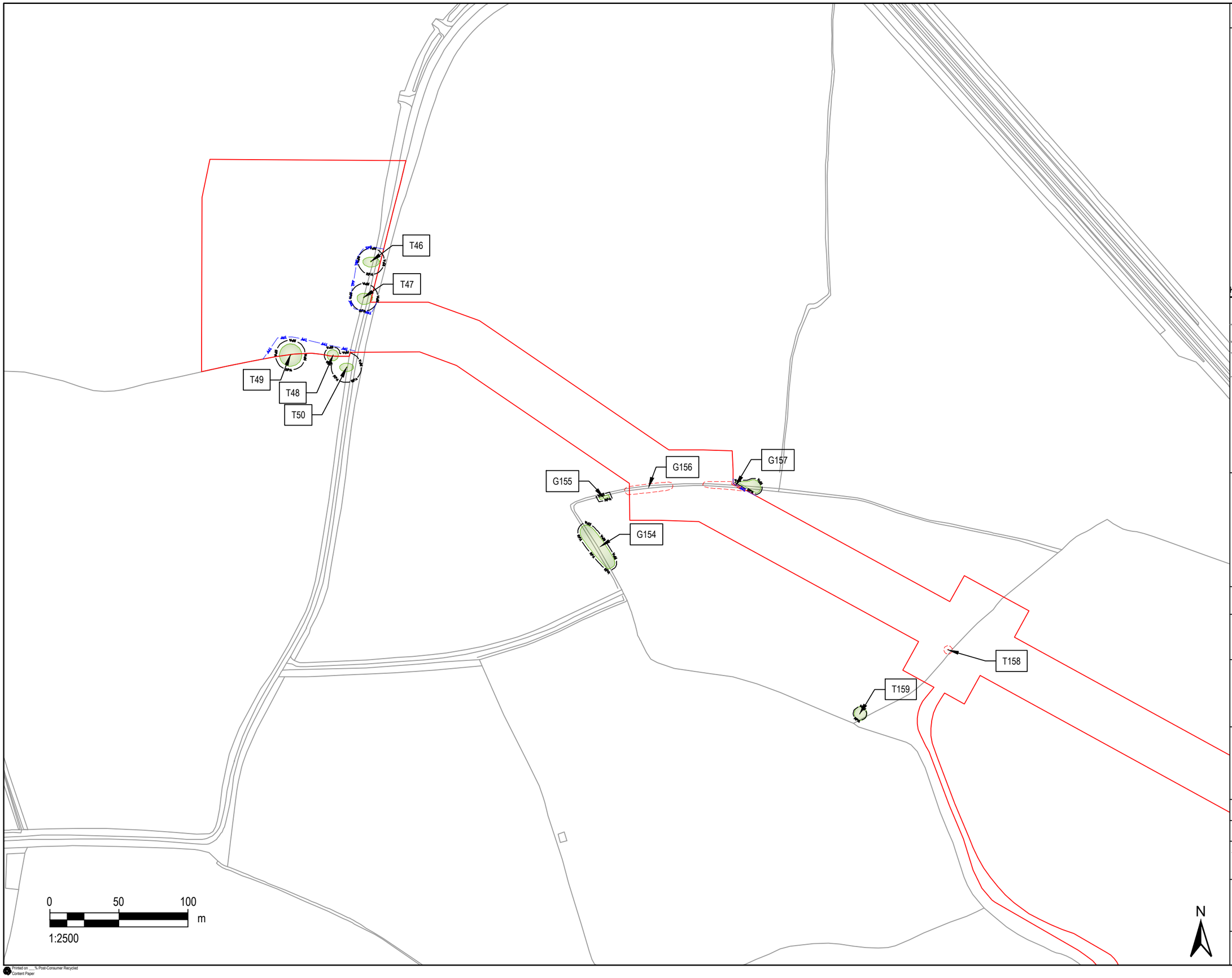
When obvious issues have been identified recommendations will be included on the schedule.

Full consideration must be given to the presence of species protected under the Wildlife and Countryside Act (1981 - as amended), the Countryside Rights of Way Act (2000) and the 'The Conservations of Habitat and Species Regulations, 2010 (as amended). In particular the presence of bats and nesting birds. It is recommended that wherever possible, significant tree/ hedge works take place outside of the typical bird nesting season of March to September.

Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998) by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity to reduce the overall impact on energy available to the tree for growth and processes. In general the optimum period for works is between November to February and July to August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

Fieldwork survey information is subject to seasonal/ access constraints.

This schedule should be read in conjunction with AECOM Tree Constraints drawing: 60506766-ARB-001 to 010 (Annex A).

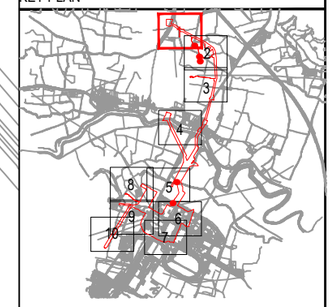


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

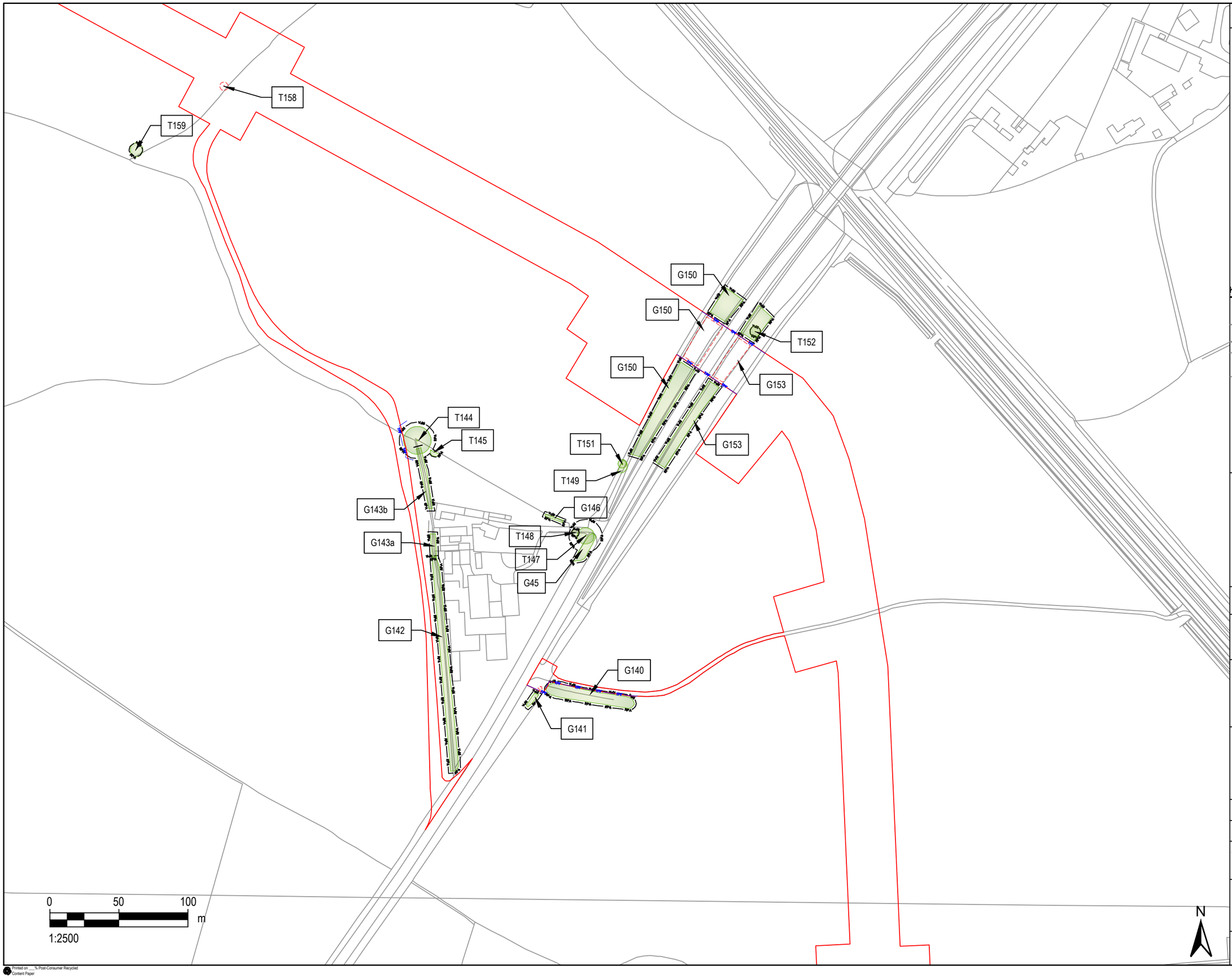
Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-011	01

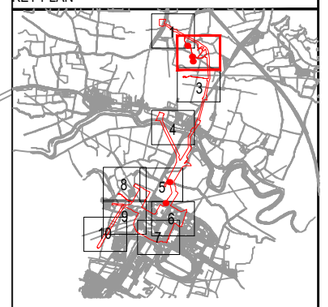


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

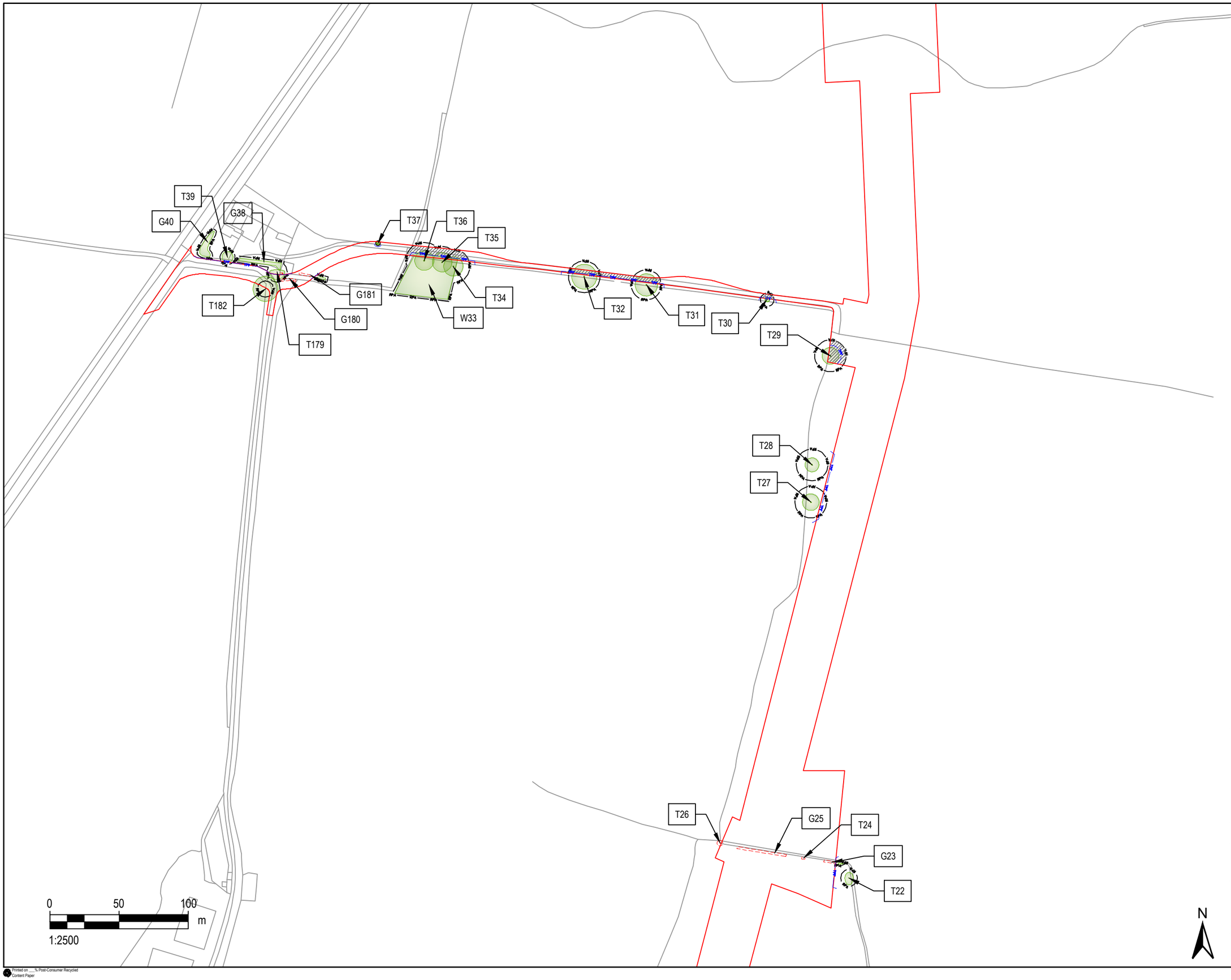
Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-012	01

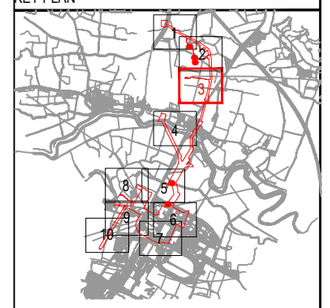


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-013	01

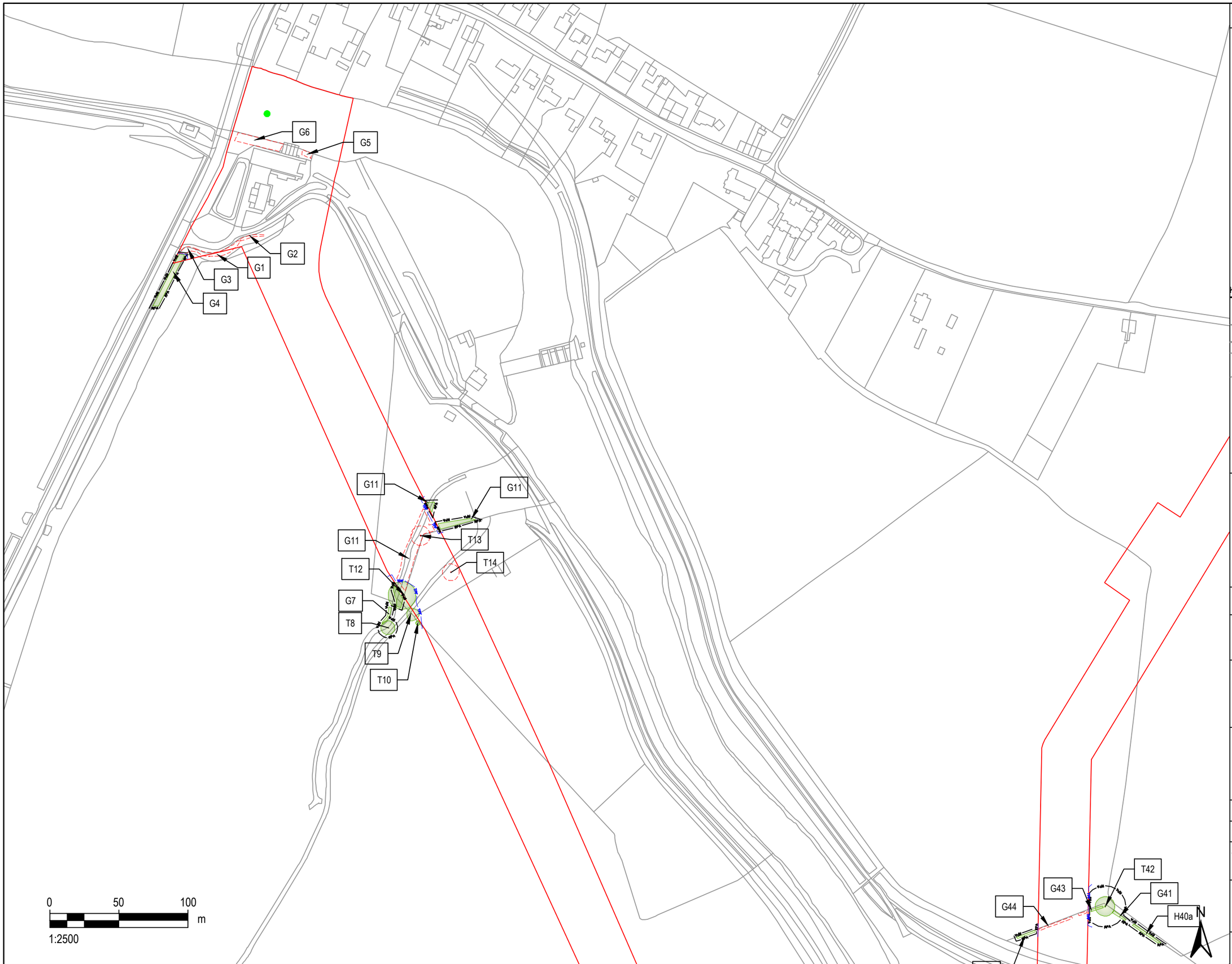
ISO A3 297mm x 420mm

Last Plotted: 2017-05-24

Last saved by: RICHARD.BASSINDALE

Filename: K:\NEWPROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG

ISO A3 297mm x 420mm

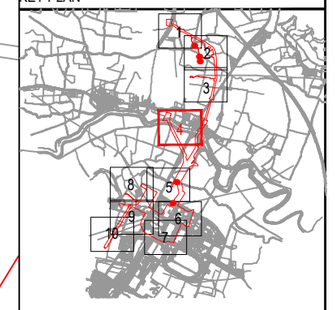


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

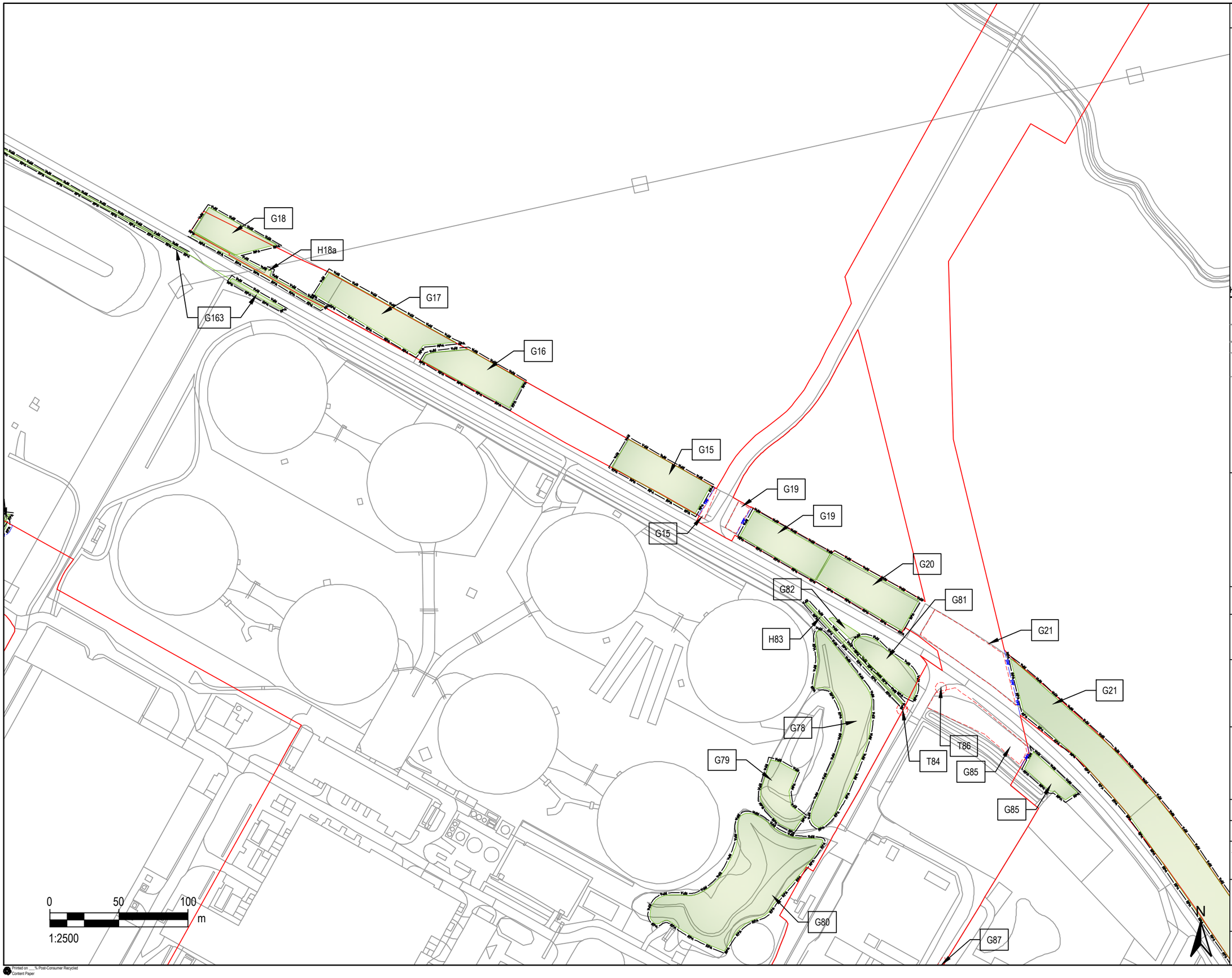
AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-014	01

Filename: K:\NEWPROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

ISO A3 297mm x 420mm

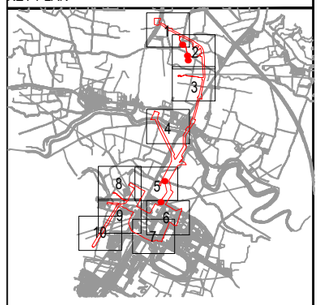


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

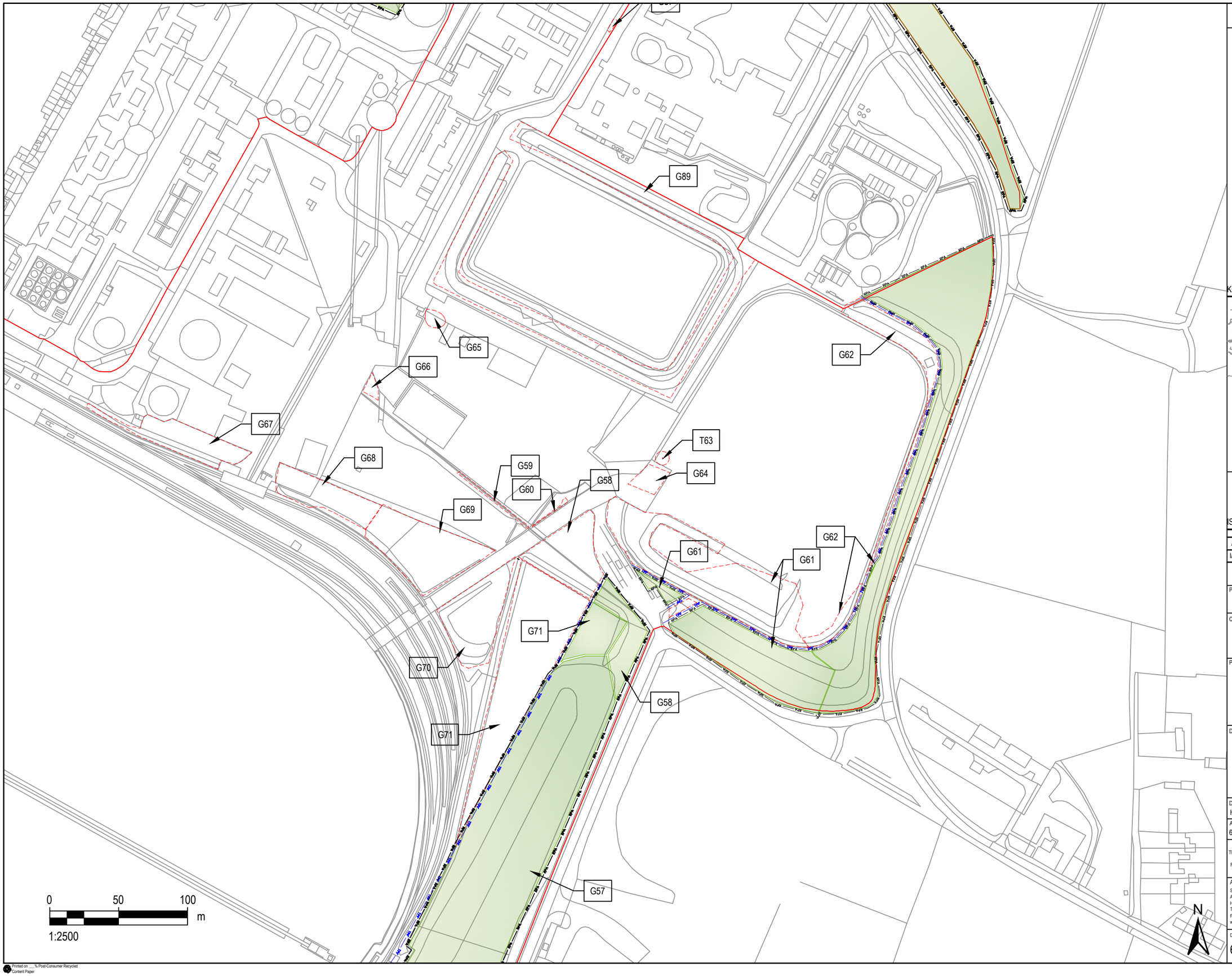
AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-015	01

Filename: K:\NEW\PROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

ISO A3 297mm x 420mm

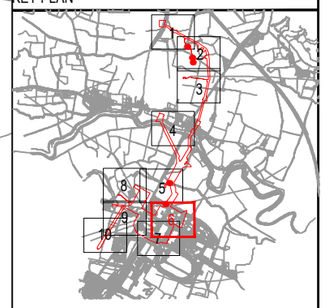


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	18 04 2017	G53, G61, G68, G69, G70 amended

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

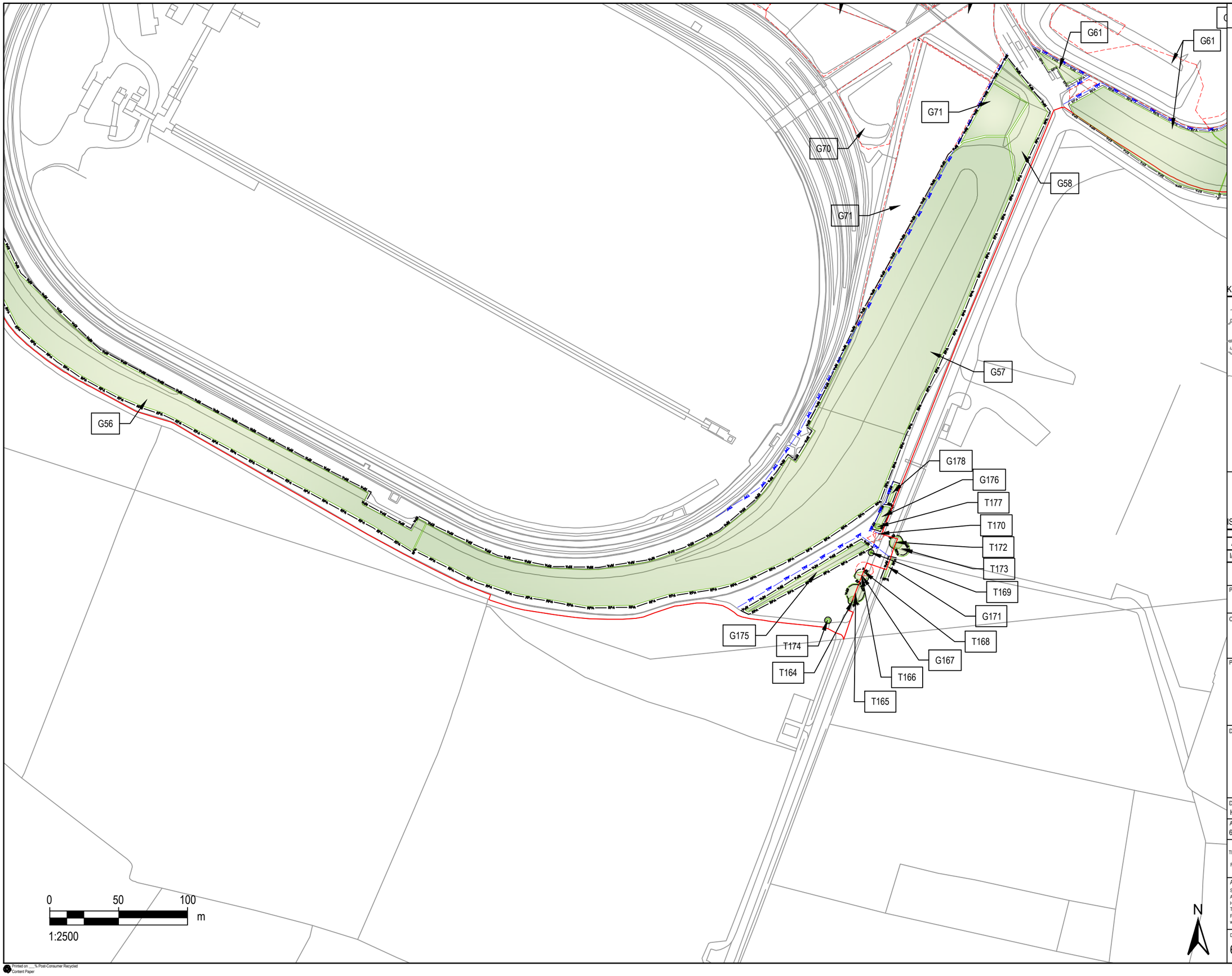
AECOM Internal Project No. 60506766
Scale @ A3 1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number 60506766-ARB-016
Rev 01

Filename: K:\NEWPROJE\60506766 - EGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

ISO A3 297mm x 420mm

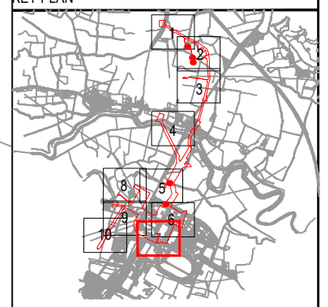


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	18 04 2017	G53, G61, G68, G69, G70 amended

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-017	01

Filename: K:\NEW\PROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

ISO A3 297mm x 420mm

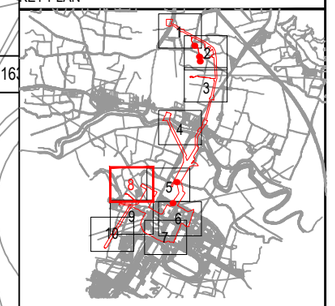
Filename: K:\NEW\PROJE\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



G162

H113

G112

G115

T114

G110

T161

H160

G111

0 50 100 m

1:2500

N

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

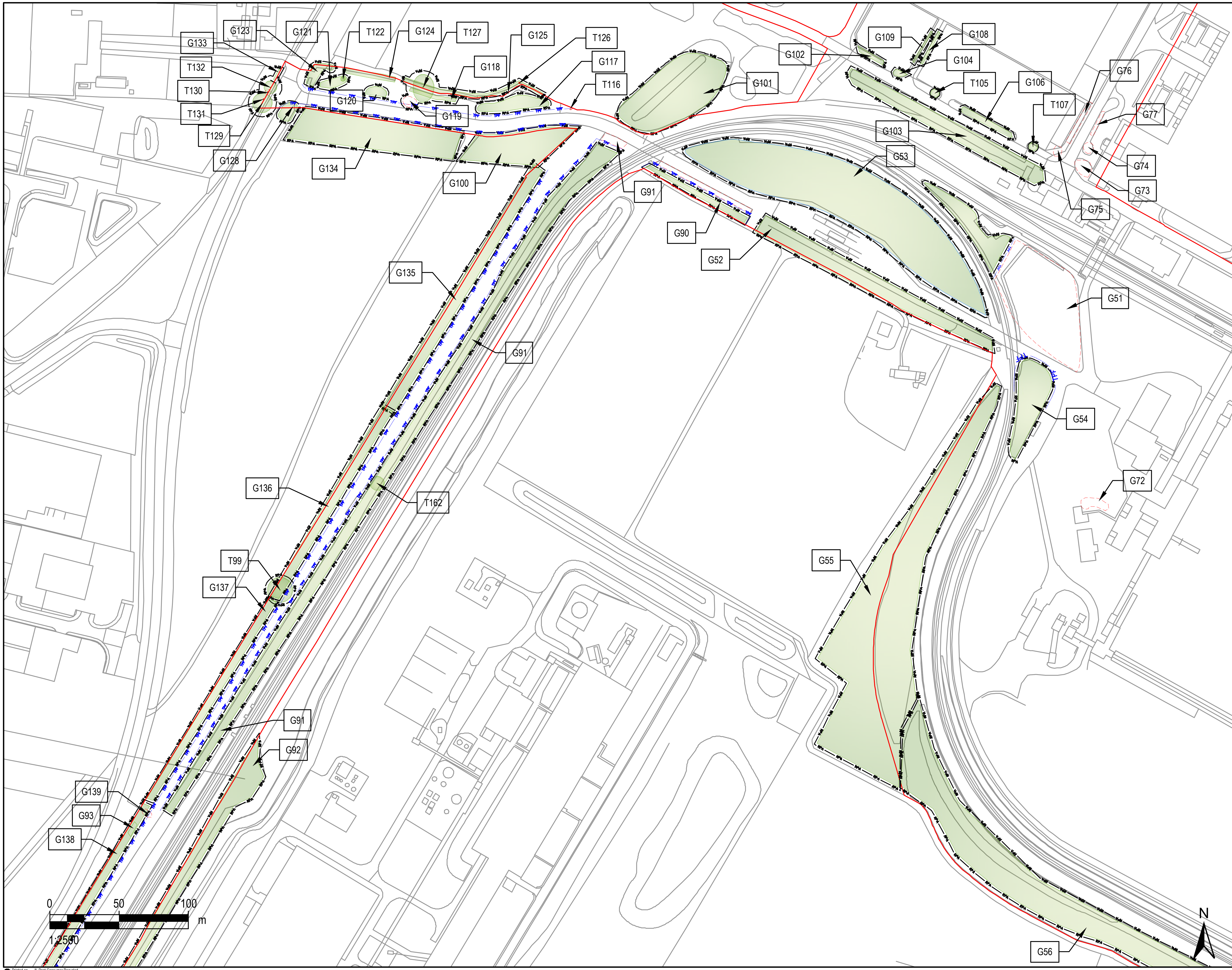
Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-018	01



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	18 04 2017	G53, G61, G68, G69, G70 amended

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No. 60506766

Scale @ A3 1:2500

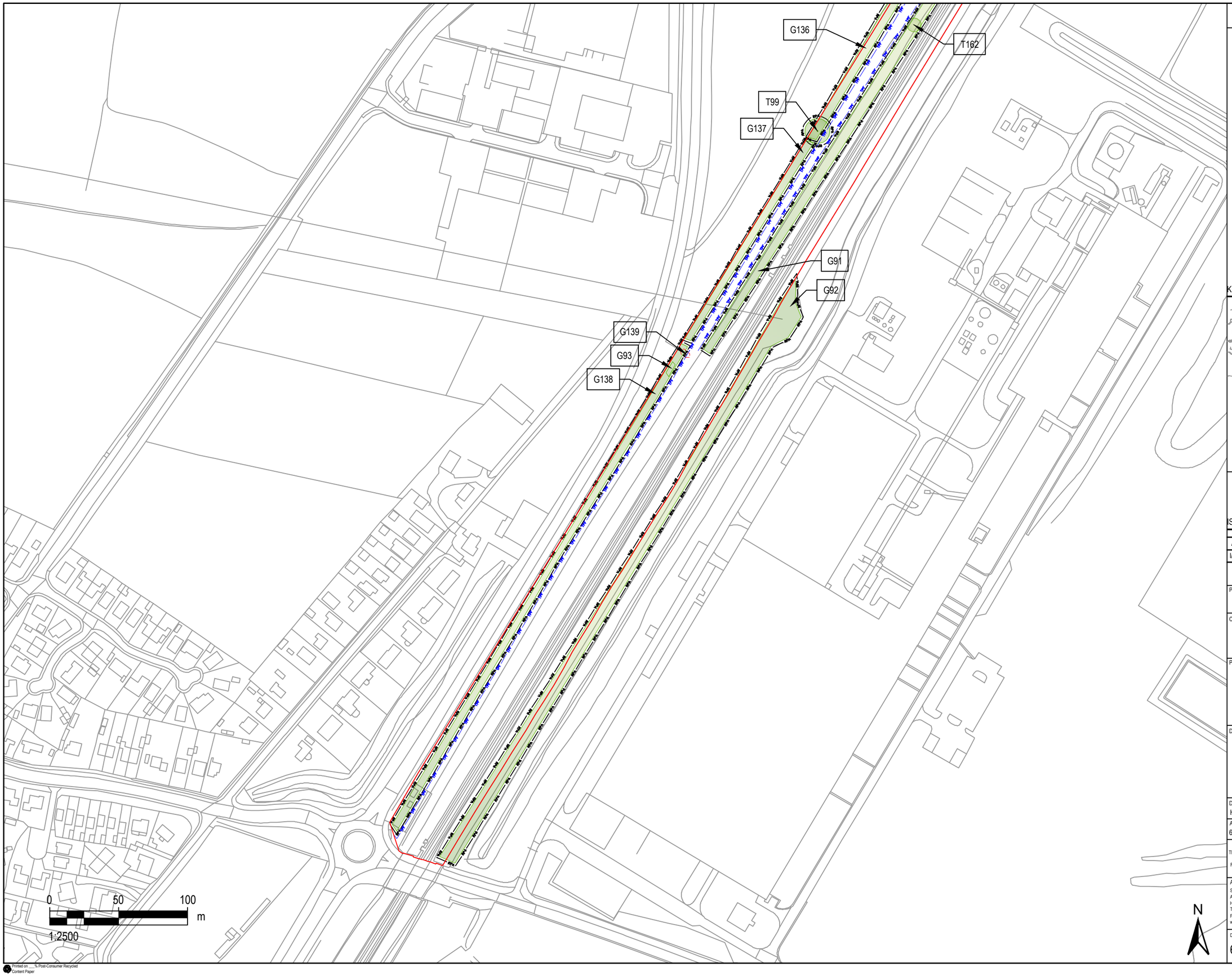
AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

AECOM

Drawing Number
60506766-ARB-019

Rev
01

ISO A3 297mm x 420mm

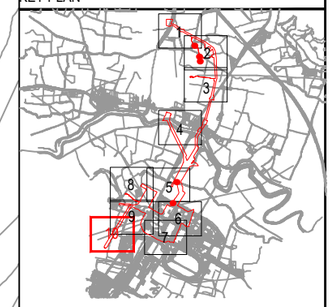


THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- TREE SURVEY BOUNDARY
- TREE PROTECTION FENCING
- EXISTING RETAINED TREE, GROUP OR HEDGE
- EXISTING TREE, GROUP OR HEDGE TO BE REMOVED.
- ROOT PROTECTION AREAS (RPA) - AS DEFINED BY BS 5837:2012
- UNCATEGORISED TREES, GROUPS & HEDGEROWS
- GROUND PROTECTION AREA

KEY PLAN



ISSUE/REVISION

A	18 04 2017	Layout amended
I/R	DATE	DESCRIPTION

Purpose of Issue
DCO APPLICATION

Client
EGGBOROUGH POWER LTD

Project Title
EGGBOROUGH CCGT DCO

Drawing Title
TREE PROTECTION PLAN

Drawn	Checked	Approved	Date
HB	RB	KC	30/03/2017

AECOM Internal Project No.	Scale @ A3
60506766	1:2500

AECOM
Scott House
Alençon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number	Rev
60506766-ARB-020	01

Filename: K:\NEWPROJ\E\60506766 - EGGBOROUGH CCGT\ARBORICULTURE\GRAPHICS\CAD\60506766-ARB-011_020_V3.DWG Last saved by: RICHARD.BASSINDALE Last Plotted: 2017-05-24

APPENDIX 2: BIODIVERSITY OFFSETTING METRICS

Table A1: Rationale for condition and distinctiveness scores applied to habitats to be lost, restored and created

HABITAT	CONDITION ASSESSMENT*		DISTINCTIVENESS ASSESSMENT**	
	FEP HABITAT USED	SCORE	IHS LABEL USED	SCORE
Habitats to be permanently lost				
Plantation coniferous woodland	T06 – Mixed woodland Fails on 1 criteria: 1. This should be an area of trees with complete canopy cover (pass) 2. The woodland must be free from damage (in the last five years) by stock or wild mammals (pass) 3. There should be no evidence of machinery storage, signage or other inappropriate management (fail) – a lack of management has led to very dense growth. Good-fair structural condition recorded during arboricultural survey.	2 (Moderate)	Other coniferous woodland (WCZ)	2 (Low)
Species-poor grassland	G02 – semi-improved grassland There are no condition assessment criteria for this habitat type. The grassland areas to be lost are considered to be in poor condition as they are closely grazed by rabbits and as a result lack structural or botanical diversity.	1 (Poor)	Grassland – probably improved (GP0)	2 (Low)
Standing water (lagoon)	W03 – Eutrophic standing waters Fails on 2 or more criteria: 1. A marginal fringe of emergent vegetation is present (fail) 2. A range of submerged and floating leaved plants is present (fail) 3. Clear water is dominated by plants (and the water is not turbid or green) (fail) 4. The fish community comprises a range of species with no or low numbers of bottom-feeding fish (such as carp or bream) (fail)	1 (Poor)	Other standing open water and canals (ASZ)	4 (Medium)
Plantation broad-leaved woodland	T06 – Mixed woodland Fails on 1 criteria: 1. This should be an area of trees with complete canopy cover (pass) 2. The woodland must be free from damage (in the last five years)	2 (Moderate)	Mixed woodland (WB1)	4 (Medium)

HABITAT	CONDITION ASSESSMENT*		DISTINCTIVENESS ASSESSMENT**	
	FEP HABITAT USED	SCORE	IHS LABEL USED	SCORE
	by stock or wild mammals (pass) 3. There should be no evidence of machinery storage, signage or other inappropriate management (fail) – Good-dead physiological and structural condition recorded during arboricultural survey.			
Scrub	V05 – Scrub of high environmental value Fails on 2 or more criteria: 1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover) (fail) 2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs (fail) 3. Pernicious weeds and invasive species make up less than 5% of the ground cover (fail) 4. The scrub has a well-developed edge with ungrazed tall herbs (fail) 5. There are many clearings and glades within the scrub (pass)	1 (Poor)	Scrub woodland (WB2)	4 (Medium)
Arable (AGI)	A01 – Arable There are no condition assessment criteria for this habitat type – assessed as poor.	1 (Poor)	Cereal crops (CR2)	2 (Low)
Retained habitats to be enhanced (baseline condition)				
Plantation woodland (broad leaved and mixed)	T06 – Mixed woodland Fails on 1 criteria: 1. This should be an area of trees with complete canopy cover (pass) 2. The woodland must be free from damage (in the last five years) by stock or wild mammals (pass) 3. There should be no evidence of machinery storage, signage or other inappropriate management (fail) – Good-dead physiological and structural condition recorded during arboricultural survey.	2 (Moderate)	Mixed woodland (WB1)	4 (Medium)
Species poor grassland	G02 – semi-improved grassland There are no condition assessment criteria for this habitat type. The grassland areas to be enhanced are considered to be in moderate condition as they are only partially affected by rabbit	2 (Moderate)	Grassland – probably improved (GP0)	2 (Low)

HABITAT	CONDITION ASSESSMENT*		DISTINCTIVENESS ASSESSMENT**	
	FEP HABITAT USED	SCORE	IHS LABEL USED	SCORE
	grazing.			
Hard standing	n/a	n/a	n/a	n/a
Arable	A01 – Arable There are no condition assessment criteria for this habitat type – assessed as poor.	1 (Poor)	Cereal crops (CR2)	2 (Low)
Retained habitats to be enhanced (target condition)				
Plantation woodland (broad leaved and mixed)	T06 – Mixed woodland The proposed management of existing screening woodland will aim to improve the condition of the habitat from Moderate to Good.	3 (Good)	Mixed woodland (WB1) It is considered unlikely that management of the plantation woodland would lead to an increase in the distinctiveness score.	4 (Medium)
Species rich grassland	G06 – Lowland meadows Botanical enhancement of existing areas of species poor grassland will aim to improve their condition to Good, in accordance with the criteria below. 1. Cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle, marsh ragwort, cow parsley and bracken) less than 5%. 2. Cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed above and creeping buttercup and white clover) more than 20%. 3. Cover of bare ground (including localised areas, for example, rabbit warrens) less than 10%. 4. Cover of invasive trees and shrubs less than 5%, and indicators of water logging (such as large sedges, rushes, reeds) less than 30%. 5. At least two indicator species are frequent and two occasional.	3 (Good)	Other neutral grassland (GNZ)	4 (Medium)
Pond	W07 – Ponds Management of the new surface water attenuation pond for the benefit of biodiversity will aim to create a pond in moderate condition in accordance with the following criteria. 1. The pond should be set within a semi-natural habitat.	2 (Moderate)	Pond (AP11)	6 (High)

HABITAT	CONDITION ASSESSMENT*		DISTINCTIVENESS ASSESSMENT**	
	FEP HABITAT USED	SCORE	IHS LABEL USED	SCORE
	2. It should be within 500 m of another wetland feature (such as a pond, river or fen). 3. There should be no obvious sign of pollution or of inappropriate quality of the water supply. 4. There should be an absence of damaging non-native plant or animal species. (Damaging plants include water fern, Australian swamp stonecrop, parrot's feather, floating pennywort and Japanese knotweed (on the bank). Damaging animals include non-native crayfish, reptiles and amphibians.) 5. The pond should not be stocked with fish or support damaging numbers of wildfowl. 6. It should experience only natural fluctuations in water levels.			
Scrub and trees	V05 – Scrub of high environmental value Planting and management of scrub and trees around the AGI will aim to create habitat in at least moderate condition in accordance with the following criteria: 1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover) 2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs 3. Pernicious weeds and invasive species make up less than 5% of the ground cover 4. The scrub has a well-developed edge with ungrazed tall herbs 5. There are many clearings and glades within the scrub	2 (Moderate)	Scrub woodland (WB2)	4 (Medium)

* based on Natural England (2010)

** based on Defra (2012)

Table A2: Calculation of the biodiversity value of habitats to be permanently lost

HABITAT	A AREA (HA)^	B CONDITION	C DISTINCTIVENESS	BIODIVERSITY UNITS (A X B X C)
Plantation coniferous woodland	0.75	2	2	3
Species poor grassland	1	1	2	2
Standing water (lagoon)	1.25	1	4	5
Plantation broad leaved woodland	3.1	2	4	24.8
Scrub	0.35	1	4	1.4
Arable (AGI)	0.4	1	2	0.8
Total	**6.85**			**37**

^ habitat areas are approximate

Table A3: Calculation of the baseline biodiversity value of the areas to be enhanced

ENHANCEMENTS	EXISTING HABITATS	A AREA (HA)^	B CONDITION	C DISTINCTIVENESS	BIODIVERSITY UNITS (A X B X C)
Existing woodland management	Plantation woodland (broad leaved and mixed)	11	2	4	88
Species rich grassland	Species poor grassland	1.4	2	2	5.6
New attenuation pond	Hard standing	0.3	n/a	n/a	0
AGI planting	Arable	0.4	2	1	0.8
	Total	**12.8**			**94.4**

^ habitat areas are approximate

Table A4: Calculation of the target biodiversity value of the areas to be enhanced

ENHANCEMENTS	TARGET HABITATS	A AREA (HA)^	B CONDITION	C DISTINCTIVENESS	BIODIVERSITY UNITS (A X B X C)
Existing woodland management	Plantation woodland (broad leaved and mixed)	11	3	4	132
Species rich grassland	Species rich grassland	1.4	3	4	16.8
New attenuation pond	Pond	0.3	2	6	3.6
AGI planting	Scrub and trees	0.4	2	4	3.2
	Total	**12.8**			**155.6**

^ habitat areas are approximate

Table A5: Calculation of the net biodiversity units gained through enhancement

ENHANCEMENTS	BASELINE UNITS	TARGET UNITS	A BIODIVERSITY UNITS GAINED (TARGET – BASELINE)	RISK MULTIPLIERS			ADJUSTED UNITS (A/ (B X C X D))
				B DIFFICULTY[1]	C SPATIAL[2]	D TIME LAG[3]	
Existing woodland management	88	132	44	1	1	1.7	25.88
Species rich grassland	5.6	16.8	11.2	1	1	1.2	9.33
New attenuation pond	0	3.6	3.6	1	1	1.2	3.00
AGI planting	0.8	3.2	2.4	1	1	1.2	2.00
						Total	**40.22**

1 takes into account the difficulty in creating or restoring different habitats

2 takes into account risks associated with the location of offsets. In this case, as the enhancements are all being provided on site and will contribute to local ecological networks, a multiplier of 1 has been used (ie there is no spatial risk)

3 takes into account how long the restored / newly created habitat will take to achieve target condition

APPENDIX 3: MANAGEMENT AND MAINTENANCE SCHEDULE

Landscape Element Type	Maintenance Year 1												Maintenance Years 2, 3 & 4												Maintenance Year 5 and ongoing											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Species Rich Grassland																																				
Remove litter, rubbish and debris	■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■	
Spot-treat undesirable species				■		■			■							■		■			■							■		■			■			
Establishment cuts (may occur pre-practical completion)					■	■	■	■																												
Subsequent cuts																				■												■				
Removal of arisings					■	■	■	■													■												■			
Control emerging scrub								■												■												■				
Woodland, Woodland Edge, Scrub & Scrub Edge																																				
Spot-treat undesirable species				■		■			■							■		■			■							■		■			■			
Hand-pulling of ragwort (if required)					■	■	■	■									■	■	■	■									■	■	■	■				
Re-firm plants			■			■				■					■			■				■					■									
Inspect and adjust stakes, guards and ties			■							■					■							■					■							■		
Pruning											■												■												■	

Landscape Element Type	Maintenance Year 1												Maintenance Years 2, 3 & 4												Maintenance Year 5 and ongoing											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Apply herbicide				■		■			■							■		■			■							■		■			■			
Control unwanted emerging scrub within plots								■												■												■				
Watering (timing as required)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Thinning and coppicing																																			■	
Remove litter, rubbish and debris	■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■		■	
Replacement of failed/ failing plants										■	■	■	■	■	■							■	■	■	■	■	■							■	■	■
Remove stakes and guards																					■												■			
Monitoring and Inspection																																				
Monthly weed control inspection					■	■	■	■	■								■	■	■	■	■								■	■	■	■	■			
Annual inspection of all planted areas to record failed or defective plants									■												■												■			
Monitoring of landscaped areas to access species diversity and establishment				■												■												■								