

Net Zero Teesside Project

Planning Inspectorate Reference: EN010103

Land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, Teesside

The Net Zero Teesside Order

Consultation on Proposed Changes to the Net Zero Teesside DCO Application

The Planning Act 2008



Applicants: Net Zero Teesside Power Limited (NZT Power Ltd) & Net Zero North Sea Storage Limited (NZNS Storage Ltd)

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GLOSSARY

Abbreviation	Description		
AGI	Above-Ground Installation		
CATS	Central Area Transmission System		
CO ₂	Carbon Dioxide		
DCO	Development Consent Order		
EIA	Environmental Impact Assessment		
ES	Environmental Statement		
ExA	Examining Authority		
FEED	Front-End Engineering Design		
HDD	Horizontal Directional Drilling		
HGV	Heavy Goods Vehicle		
HP	High Pressure		
HRA	Habitat Regulations Assessment		
NGG	National Gas Grid		
NWL	Northumbrian Water Ltd.		
NZT	Net Zero Teesside		
PCC	Power Capture and Compression		
PINS	Planning Inspectorate		
Ramsar	Wetland site designated to be of international		
Railisai	importance under the Ramsar Convention of 1971		
SSSI	Site of Special Scientific Interest		
SPA	Special Protection Area		
STDC	South Tees Development Corporation		
TGPP	Teesside Gas Processing Plant		
WwTP	Wastewater Treatment Plant		



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1.0 INTRODUCTION

Overview

- 1.1.1 On 19 July 2021, Net Zero Teesside Power Limited and Net Zero North Sea Storage (the 'Applicants') made an application for a Development Consent Order (DCO) under the Planning Act 2008 to the Planning Inspectorate (who considers such applications on behalf of the Secretary of State for Business, Energy and Industrial Strategy) (the 'DCO Application'). The DCO Application was accepted for examination on 16 August 2021.
- 1.1.2 The Applicants are seeking development consent for the construction, operation and maintenance of the Net Zero Teesside Project (NZT), including associated development (together the 'Proposed Development') on land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, on Teesside (the 'Site'). The former Steel Works site, along with other land required for the Proposed Development, lies within the boundary of South Tees Development Corporation's (STDC) administrative area, and its main development site is now known as 'Teesworks'.
- 1.1.3 The Application is available on the Planning Inspectorate's website at: <u>https://infrastructure.planninginspectorate.gov.uk/projects/north-</u> <u>east/the-net-zero-teesside-project/?ipcsection=overview</u>
- 1.1.4 Prior to the DCO Application being submitted to the Planning Inspectorate, the Applicants undertook multiple stages of preapplication consultation. The Applicants are grateful for the extensive feedback that has already been received from the local community, others with an interest in the Proposed Development and statutory consultees, including the local authorities. The feedback from these consultations was taken into account throughout the development of the proposals for the Proposed Development and in the finalisation of the DCO Application.
- 1.1.5 Due to the nature and scale of the Proposed Development, the extent of land interests within the proposed Order Limits and the potential to reuse existing infrastructure to reduce its construction effects, the DCO Application submitted in July 2021 necessarily included a degree of optionality. The Applicants have previously explained to the Planning Inspectorate (PINS) the need to retain a degree of optionality within the DCO Application, but have also been clear that their aim would be to reduce that optionality, if possible, in advance of the Examination as the design of the Proposed Development is progressed. All the options included in the DCO Application were consulted upon and assessed as part of the environmental impact assessment (EIA) for the Proposed Development.



- 1.1.6 Since submission of the DCO Application, the Applicants have continued to engage with Interested Parties with a view to addressing their comments and agreeing common ground, while also continuing with detailed design development. This has included progressing further work on the optionality around certain elements of the Proposed Development, notably the connections corridors. This work has identified a number of changes to the Proposed Development. The changes relate primarily to the optionality included in the DCO Application (particularly around the connection corridors for the Proposed Development) and a reduction in land take (or a reduction in the powers sought over land). In addition, there are other minor changes or updates to the Proposed Development.
- 1.1.7 The proposed changes would deliver refinements to the Proposed Development which in many cases reduce its impacts. However, before making a written change request to PINS, the Applicants are consulting the public, landowners and other stakeholders so that their views can be taken into account on the proposed changes. As part of making the change request, the Applicants will also submit a consultation report showing how they have had regard to the responses received to the consultation. It will then be for the Examining Authority (ExA) to decide if the changes can be made to the DCO Application before it is examined.
- 1.1.8 There are three main proposed changes to the Proposed Development when compared with that presented in the DCO Application submitted in July 2021:
 - the natural gas connection route (the 'Gas Connection') for Work No. 2A has been selected;
 - the CO₂ Gathering Network route from the north of the River Tees and across the River Tees to the Power Capture and Compression (PCC) site (forming part of Work No. 6) has been reduced in land area; and
 - updates have been made to the land within the Proposed Development Order Limits arising from ongoing design work, construction assessments and landowner discussions.
- 1.1.9 From these three main changes, thirteen specific changes flow. These are described individually in Section 2.

Structure of this consultation document

- 1.1.10 This consultation document is structured as follows:
 - Section 2 of this consultation document gives an overview of the proposed changes described in terms of the Work Nos. as presented in the draft DCO;
 - Section 3 of this consultation document describes the potential for the proposed changes to alter the assessment of environmental effects as currently considered in the DCO Application; and



• Section 4 sets out the indicative programme for the formal change request.



2.0 PROPOSED CHANGES

Overview

- 2.1.1 The Applicants are proposing thirteen changes in total, which are summarised in **Table 2.1** below. These changes affect the following Work Nos. in the DCO Application:
 - Work No. 2 (Gas Connection);
 - Work No. 3A (Electrical Connection New NZT sub-station);
 - Work No. 5A (Water discharge connection existing outfall) and Work No. 5C (pipeline to Bran Sands Wastewater Treatment Plant (WwTP);
 - Work No. 6 (CO₂ Gathering Network);
 - Work Nos. 9A, 9B, 9D, 9F (Laydown Areas); and
 - Work No. 10 (Access and Highway Improvements).
- 2.1.2 There are no changes to the following Work Nos. in the DCO Application:
 - Work No. 1 (Low Carbon Electricity Generating Station);
 - Work No. 3B (extension to Tod Point sub-station);
 - Work No. 4 (Water supply connection);
 - Work No. 5B (replacement outfall);
 - Work No. 7 (HP Compressor Station);
 - Work No. 8 (CO₂ Export Pipeline); and
 - Work Nos. 9C and 9E (Laydown Areas).
- 2.1.3 The changes to the Proposed Development to reduce optionality in respect of the Gas Connection and CO₂ Gathering Network are set out below. Full details of the options originally presented in the DCO Application submitted in July 2021 are set out in the Explanatory Memorandum (October 2021) (Document Ref. 2.2).

Gas Connection

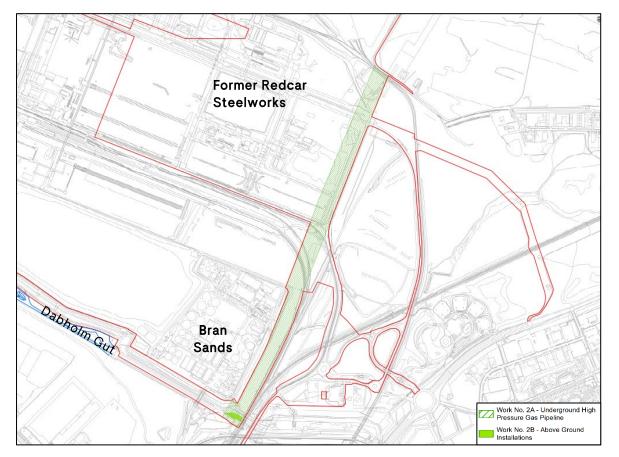
- 2.1.4 As part of the DCO Application, three options for the Gas Connection (Work No. 2A) were included:
 - Option 1A (National Gas Grid (NGG) tie-in and new underground pipeline): natural gas will be supplied via a tie-in to the gas transmission network on the north bank of the Tees at Seal Sands with subsequent transport through a new 24" buried gas line. The new pipeline would cross the Tees within a newly constructed tunnel.
 - Option 1B (Trafigura tie-in and new underground pipeline): the outlet from a new NZT Above Ground Installation (AGI) could be routed into the existing, disused 24" Trafigura pipeline which runs between the



Teesside Gas Processing Plant (TGPP) on Seal Sands to the Navigator Terminal. At this location a tie-in will be constructed which then connects into the new 24" gas line and into the new tunnel and on to PCC Site.

- Option 2 (Sembcorp Pipeline Tie-In): the outlet from a new NZT AGI would be fed into the existing, disused 24" Sembcorp gas line which runs through North Tees. The existing Sembcorp pipeline crosses the River Tees and lands on the north bank of Dabholm Gut and runs on to the Wilton site on South Tees. At a point near the Bran Sands Wastewater Treatment Plan (WwTP), a new tie-in would be constructed which then connects via a new AGI into a new gas pipeline which would run to the PCC Site via a wayleave to the east of the Bran Sands WwTP.
- 2.1.5 During the period from May 2021 to February 2022, a combination of further engineering studies, on-site assessments and landowner and asset owner engagement has enabled the optionality for Work No. 2A to be refined, with the results of these refinements shown in **Figure 2-1** below. The Applicants propose to select Option 2 (Sembcorp Pipeline Tie-In). The route of the tie-in pipeline and associated AGI are shown in Figure 2-1.

Figure 2-1 Location of Work No. 2A: Option 2 (Sembcorp Pipeline Tie In)





- 2.1.6 The 'New Build Options' comprising Work No. 2A Option 1A (NGG tie-in and new underground pipeline) and Work No. 2A Option 1B (Trafigura tie-in and new underground pipeline) for the Gas Connection are proposed to be removed from the Order Limits.
- 2.1.7 The optionality with respect to the Gas Connection will therefore be removed from the Proposed Development by the proposed changes. The removal of Work No. 2A Option 1A and Option 1B has the consequential beneficial impact of reducing the land requirements for the Proposed Development at the following locations:
 - next to Seal Sands Road (North Tees);
 - on the Navigator Terminals land (North Tees); and
 - on the south bank of the River Tees, in between the Tees and the PCC Site.

CO2 Gathering Network

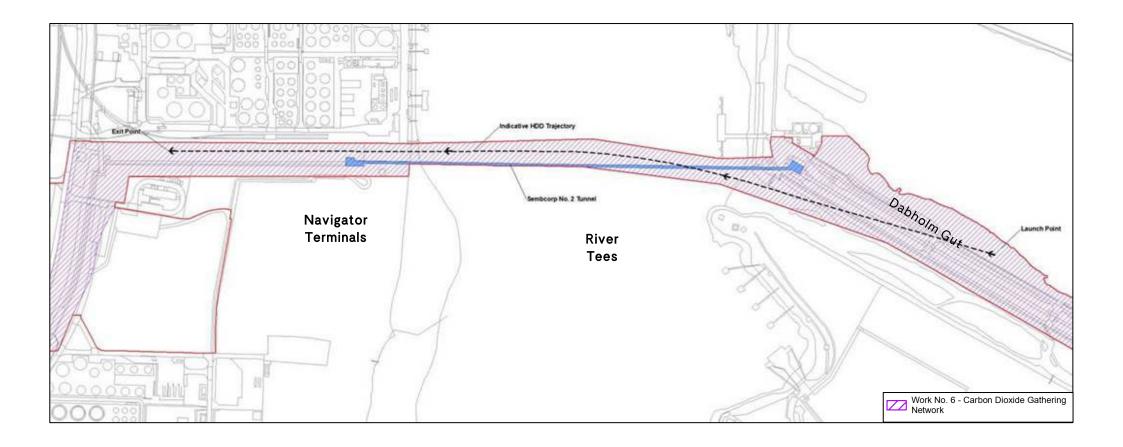
- 2.1.8 As part of the DCO Application, two options were included for part of the CO₂ Gathering Network (Work No. 6):
 - Work No. 6 Option 1 (Bored Long Tunnel Direct to PCC): a connection via a bored tunnel from Seal Sands directly to the PCC Site (and shared with the Gas Connection if Option 1A or Option 1B were selected for the Gas Connection) and then below ground along the southern side of the proposed Teesworks Spine Road to the PCC Site.
 - Work No. 6 Option 2 (HDD and connection via Dabholm Gut): a connection installed using a horizontal directional drilled (HDD) bore from Seal Sands to the northern bank of the mouth of Dabholm Gut and then above ground along the northern bank of Dabholm Gut past Bran Sands WwTP and then north to the PCC Site.
- 2.1.9 As a result of the selection of Work No. 6 Option 2 (Sembcorp Pipeline Tie-in) for the Gas Connection, Option 1 (Bored Long Tunnel Direct to the PCC Site) has been de-selected. Building a new tunnel for the CO₂ pipeline on its own does not merit the construction risks and associated environmental effects.
- 2.1.10 The proposed changes therefore comprise two revised options for the CO₂ Gathering Network's crossing of the Tees (see **Figure 2-2**) below:
 - Work No. 6 Option 2 (HDD and connection via Dabholm Gut): the option of an HDD bore will remain within the DCO Application. However, a changed trajectory for the HDD bore used to allow the pipeline to cross the Tees now necessitates changing the direction that the HDD will be drilled and the pipeline pulled from; and
 - Work No. 6 Option 3 (Sembcorp No 2 Tunnel): this is a new option that makes use of existing infrastructure in an existing Tunnel across



the River Tees that is located within the existing corridor for the CO₂ Gathering Network (the 'Sembcorp No 2 Tunnel').



Figure 2-2 Location of Work No. 6 Options 2 (Indicative HDD Trajectory) and 3 (Sembcorp No. 2 Tunnel)





Changed HDD Trajectory (Option 2)

2.1.11 Further detailed engineering assessments have been carried out for the HDD across the River Tees. These have taken into account landowner, design and operational constraints in the area, current and future plans, plus existing asset infrastructure. The engineering study work has demonstrated to the Applicants that the HDD routing trajectory needs to be changed and that as a result of the trajectory change the launch site for the HDD now needs to be on the south side of the River Tees on land to the north of Dabholm Gut (previously it was on Navigator Terminals land to the north of the Tees). The exit point is now expected to be north of Navigator Terminals land (on land still within the Order Limits).

Introduction of Option 3 (Sembcorp No 2 Tunnel)

- 2.1.12 As a result of a combination of detailed engineering and constructability studies, on-site construction review and detailed discussions with the asset owner (Sembcorp), inclusion of this new option is now being proposed.
- 2.1.13 There are two reasons for including this further option, namely;
 - Sembcorp and the Applicants consider that there is sufficient space inside the tunnel for the construction and operation of the CO₂ pipeline and that the construction risks are manageable.
 - Use of the Sembcorp No. 2 Tunnel also presents a more sustainable solution that utilises existing infrastructure, and will therefore cause less disruption in the area compared to an HDD. The introduction of this option is proposed via the changes set out below and it is currently the Applicants' preferred option. Subject to final engineering assessments, which are anticipated to be completed by June 2022, and considering responses to the consultation, it is anticipated that this option will be preferred instead of Option 2 (the HDD).

Other Refinement of the Order Limits

- 2.1.14 As part of the landowner engagement process there has been feedback provided to the Applicant on the wide width of corridors being proposed in the Order Limits. These concerns have been considered by the Applicants and where possible land is proposed to be removed from the Order Limits or redesignated from 'permanent rights' to 'temporary possession'.
- 2.1.15 The Applicants have carried out a series of Land Plans reviews with the new information gathered within the period June 2021 until January 2022, combined with further constructability information (from detailed engineering studies, site visits and land-owner meetings) and as a result have reduced either the land requirements or land rights sought in:
 - the CO₂ Gathering Network corridor around Billingham and Seal Sands;



- the CO₂ Gathering Network corridor to the south-east of the NWL Brans Sands WwTW facility;
- the Electrical Connection near Tod Point substation; and
- on the Teesworks site (existing outfall and other permanent and temporary land areas, including access routes and the power cable export route).
- 2.1.16 In addition to reducing the land requirements or extent of rights sought over land, the Applicants have also identified the need for a minor increase in the size of the proposed temporary construction and laydown area located off Seaton-Carew Road in the Seal Sands area.
- 2.1.17 These proposed changes are explained in the text that follows in terms of the effect on Work Nos. as defined in the DCO Application and as shown on the Works Plans (Document Ref.4.4). Where changes relate to a specific part of the Order Limits, these are shown on the plans at **Appendix A**. Potential changes to the environmental assessments included in the Environmental Statement, which accompanied the DCO Application (Document Ref. 6.2) are set out in Section 3 of this document.

Summary of the Proposed Changes

2.1.18	A summary of th	e proposed changes is	provided in Table 2-1 below:
	,		

Table 2-1 – Summary of Proposed Development Changes

Change	Description	Material effect to the DCO on its own?
1	Removal of optionality for the Gas Connection by removal of both 'new build' options - Option 1A and Option 1B (i.e. removal of the long tunnel between North Tees and the Power Capture and Compression (PCC) site) resulting in a reduction in the Order Limits. There will also be a reduction in land take elsewhere following pre-Front End Engineering Design (pre-FEED) and landowner consultation for the selected Gas Connection – Option 2 (Sembcorp Pipeline Tie-In). (Work No. 2A)	No
2	Reduction in optionality for the Gas Connection has resulted in the removal of the Above Ground Installation required for Option 1B (Trafigura tie-in and new underground pipeline). This results in a reduction in the Order Limits. (Work No. 2B)	No



Change	Departmetion	Motorial
Change	Description	Material effect to the DCO on its own?
3	Reduction in the Order Limits for Work No. 3A Electrical Connection by removal of the STDC Sub-station at Tod Point and a reduction in land take following landowner consultation. (Work No. 3A)	No
4	Reduction in the Order Limits for Work No. 5A (repair and upgrade of the existing water discharge infrastructure to the Tees Bay) – to cover the physical extent of the existing outfall and its direct routeing to the PCC site only. (Work No. 5A)	No
5	Reduction in the Order Limits for Work No. 5C (new wastewater pipelines between Bran Sands Wastewater Treatment Plant and Generating Station) – connection to Bran Sands to reflect a reduction in land take following landowner consultation. (Work No. 5C)	No
6	Change in optionality for Work No. 6 by removal of Option 1 (Bored Long Tunnel Direct to the PCC site) for the CO ₂ Gathering Network (see also Change 1 for the Gas Connection) resulting in reduction in the Order Limits. It also includes a reduction in other land areas of Work No. 6 following pre-FEED design and landowner consultation. (Work No. 6)	No
7	Change in the means of crossing the Tees within the Order Limits for Work No. 6 CO ₂ Gathering Network to include Option 3 (Sembcorp No 2 Tunnel). (Work No. 6)	Potentially
8	Change in the means of crossing the Tees in the Order Limits for Work No. 6 CO ₂ Gathering Network (as part of Option 2 (HDD) to change the direction of HDD drilling (from Dabholm Gut to North Tees, rather than vice versa) following pre-FEED design and landowner consultation. (Work No. 6)	Potentially
9	Reduction in the Order Limits for Work No. 9 Temporary Construction and Laydown Areas to reflect a reduction in land take following pre- FEED design and landowner consultation. (Work Nos. 9A, 9B and 9F)	No



Change	Description	Material effect to the DCO on its own?
10	Minor increase in the Order Limits for Work No. 9 Temporary Construction and Laydown Areas to include an additional land-parcel at Saltholme Laydown (Work No. 9D) to allow access to Seaton Carew Road. (Work No 9D)	No
11	Change in the Work No. for pipe stringing for a land parcel on the Teesworks site from Work No. 5A to Work No. 9A. (Work No. 9A)	No
12	Addition of part of Seal Sands Road from Work No. 2A to Work No. 10 Access and Highways Improvements, to allow access to Navigator Terminals from the public road network following removal of Gas Connection Option 1A (National Grid Gas tie-in and new underground pipeline) and Option 1B (Trafigura Tie-In and new underground pipeline) from Work No. 2A (linked to Change No. 1). (Work No. 10)	No
13	Removal of small parcels of land in the Seal Sands area and from STDC land from Work No. 10 Access and Highways Improvements as no longer required following pre-FEED design. (Work No. 10)	No



3.0 POTENTIAL CHANGES TO THE ENVIRONMENTAL ASSESSMENTS

Overview

- 3.1.1 The findings of the environmental assessments reported in the DCO Application will not substantially alter as a result of the changes to the Proposed Development summarised in Table 2-1 above. However, for certain topics, reassessment work is required to confirm that there will be no new or materially different effects in respect of that topic. Such confirmation will be provided when the Applicants submit the formal change request (please see Section 4 for information on the timescales for this).
- 3.1.2 For each proposed change to the Proposed Development, this section of the document provides information on how the environmental assessment is likely to alter as a result of the proposed changes and which topics are likely to be affected. This section also provides a preliminary assessment of whether each change is likely to be beneficial, neutral or adverse (compared to the current assessment in the Environmental Statement), and summarises the scope of any further assessment considered necessary. Where this further topic assessment identifies a change, the cumulative effects will also be considered.
- 3.1.3 The text below (from paragraph 3.1.7 onwards) describes each change and the main associated changes to the environmental assessment. Tables 3-1 to 3-13 provide a summary of the stages of the development which are affected by each Change and the nature of the effects of each Change to the Proposed Development.
- 3.1.4 Table 3-14 identifies the sections of the Environmental Statement (Document Ref. 6.2) and associated figures (Document Ref. 6.3) and appendices (Document Ref. 6.4) which will be updated to take account of the changes which are taken forward. Where an update to documents is considered to be required, a tick (\checkmark) has been added and where no update is required, a dash (-) has been included. Updates to documentation are required to make the documents consistent with the Proposed Development (including the changes) or to update figures which are to be viewed in tandem with the chapters. In some instances, updates may be required because the proposed changes could result in an update to the assessment of effects.
- 3.1.5 The updated ES documents will be submitted when the Applicants submit the formal change request (Step 4).
- 3.1.6 A number of other DCO documents also require updating as a result of the proposed changes. This includes the Draft DCO (Document Ref. 2.1), Explanatory Memorandum (Document Ref. 2.2), Book of Reference (Document Ref. 3.1), Statement of Reasons (Document Ref. 3.2), Habitats



Regulations Assessment Report (HRA) (Document Ref. 5.13), and Electrical and Gas Connection Statements (Document Refs. 5.5 and 5.6). The Land Plans (Document Ref. 4.2), Crown Land Plans (Document Ref. 4.3), Works Plans (Document Ref. 4.4), Access and Rights of Way Plans (Document Ref. 4.5), PCC Facility Plans (Document Ref. 4.6), Gas Connection and AGI Plans (Document Ref. 4.7), Electrical Connection Plans (Document Ref. 4.8) and Water Connection Plan (Document Ref. 4.9) will also need to be updated. The updated versions of these DCO documents (in both clean and track change versions) will be submitted when the Applicants submit the formal change request (Step 4).

Change 1: Removal of Optionality for Work No. 2A Underground High-Pressure Gas Pipeline

- 3.1.7 This change will remove the need for a bored tunnel and the excavation of associated shafts at Navigator Terminals and Teesworks following the agreement for the supply of gas to the PCC Site from the existing Sembcorp pipeline at Bran Sands.
- 3.1.8 This change removes the requirement for construction of a pipeline through Seal Sands to connect with the NGG AGI at CATS. This also removes the requirement for excavation for gas pipeline construction along the northern side of Seal Sands Road and along the northern edge of Navigator Terminals.
- 3.1.9 Together, removing these options will reduce the volume of spoil requiring stockpiling at Navigator Terminals and transporting for re-use or off-site disposal. This will reduce associated Heavy Goods Vehicle (HGV) movements and the potential for associated dust generation. Removal of the new tunnel options will reduce noise impacts associated with shaft excavation and the use of generators required to power the micro-boring machinery. Whilst residential receptors are too distant from the tunnelling operations to be affected by noise, reducing noise generation will reduce potential impacts on wildlife (principally birds in the Teesside and Cleveland Coast SPA and Ramsar site).
- 3.1.10 The change is likely to be beneficial with a reduction in effects (i.e. less adverse), compared to those considered in the ES, during the construction phase. The change will not cause any change in the previously assessed effects during operation or decommissioning.
- 3.1.11 The environmental effects of the changes are summarised as:
 - reduced excavation of natural and potentially contaminated materials;
 - reduced dust generation;
 - reduced requirement for mobile generators;
 - reduced noise generation and potential impacts on Teesmouth and Cleveland Coast SPA/Ramsar/SSSI;



- reduced HGV and worker transport movements; and
- increased distance to receptors due to reduction in the Order Limits
- 3.1.12 **Table 3-1** provides a summary of which stage the change will affect and the environmental effects of Change 1.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes from those reported in Environmental Statement
1	Yes	Νο	Νο	Reduced excavation of natural and potentially contaminated materials. Reduced dust generation. Reduced requirement for mobile generators Reduced noise generation and potential impacts on Teesmouth and Cleveland Coast SPA/Ramsar/SSSI Reduced HGV and worker transport movements Increased distance to receptors due to reduction in the Order Limits



Change 2: Reduction in Optionality for Work No. 2B Above Ground Installations

- 3.1.13 The gas connection options all require construction of a new AGI adjacent to the National Gas Grid AGI at the CATS terminal. However, the deselection of Option 1B (Trafigura connection) for the Gas Connection removes the requirement to construct an additional AGI at Navigator Terminals to allow connection to the existing Trafigura pipeline.
- 3.1.14 Removal of this AGI reduces the need for the excavation of spoil, reduces associated HGV movements and spoil removal, reduces noise generation associated with construction, and reduces dust generation with similar effects to Change 1. The effect of removing this option is likely therefore to be beneficial during the construction phase.
- 3.1.15 The change is likely to result in a beneficial change during the construction phase, however, will not have any change in the previously predicted effects during the operation or decommissioning phases.
- 3.1.16 The environmental effects of the changes can be summarised as:
 - reduced excavation of natural and potentially contaminated materials;
 - reduced dust generation;
 - reduced noise generation and potential impacts on SPA/Ramsar/SSSI;
 - reduced HGV and worker transport movements; and
 - increased distance to receptors due to a reduction in the Order Limits.
- 3.1.17 **Table 3-2** provides a summary of which stage the change will affect and the environmental effects of Change 2.



Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
2	Yes	No	No	Reduced excavation of natural and potentially contaminated materials. Reduced dust generation. Reduced noise generation and potential impacts on SPA/Ramsar/SSSI Reduced HGV and worker transport movements Increased distance to receptors.

Change 3: Reduction in the Order Limits for Work No. 3A Electrical Connection

- 3.1.18 This change removes land from Work No. 3A at Tod Point which is not required for construction. This will increase the distance to noise sensitive receptors from sub-station construction (as construction effects were measured from the Order Limits in the DCO Application). The effect of removing this option will therefore be beneficial during the construction phase.
- 3.1.19 The environmental effects of the changes will alter as a result of the increased distance to receptors through reduction in the Order Limits at Tod Point.
- 3.1.20 The change is likely to result a beneficial change during the construction phase, however, will not have any change in the previously predicted effects during the operation or decommissioning phases.



3.1.21 **Table 3-3** provides a summary of which stage the change will affect and the environmental effects of Change 3.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
3	Yes	No	No	Increased distance to receptors through reduction in the Order Limits at Tod Point

Table 3-3 - Summary of Effects Resulting from Change 3

Change 4: Reduction in the Order Limits for Work No. 5A Wastewater Disposal Works – Existing Outfall

- 3.1.22 This option is for the re-use and potential refurbishment of an existing outfall. As a result of confirming the location of the outfall it has been possible to reduce the size of the Order Limits in this area. As effects were measured from the Order Limits in the DCO Application, this change will increase the distance to noise sensitive receptors from any refurbishment operations. The effect of removing this option is likely therefore to be beneficial during the construction phase.
- 3.1.23 The change will not result in changes to the ES because the re-use of this existing infrastructure has already been assessed. The change is likely to result in a small beneficial change during the construction phase, however, will not have any change in the previously predicted effects during the operation or decommissioning phases.
- 3.1.24 **Table 3-4** provides a summary of which stage the change will affect and the environmental effects of Change 4.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
4	No	No	No	No change. Re-use of this existing infrastructure already assessed.

Table 3-4 - Summary of Effects Resulting from Change 4



Change 5: Reduction in the Order Limits for Work No. 5C Wastewater Disposal Works – Pipeline Connections to Bran Sands

- 3.1.25 This change will increase the distance to noise sensitive receptors from construction operations associated with the wastewater pipeline connection to Bran Sands WwTP (as construction effects were measured from the Order Limits in the DCO Application).
- 3.1.26 The environmental effects of the changes will alter as a result of the increased distance receptors through reduction in the Order Limits at Bran Sands and Teesworks. The change is therefore likely to result in a small beneficial change during the construction phase, however, will not have any change in the previously predicted effects during the operation or decommissioning phases.
- 3.1.27 **Table 3-5** provides a summary of which stage the change will affect and the environmental effects of Change 5.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
5	No	No	No	Increased distance to receptors through reduction in the Order Limits at Bran Sands and Teesworks.

Table 3-5 - Summary of Effects Resulting from Change 5

Change 6: Change in Optionality for Work No. 6 CO2 Gathering Network

- 3.1.28 The change in environmental effects associated with the removal of the need to construct a long bored tunnel from Navigator Terminals direct to the PCC Site for use by the CO₂ Gathering Network, is the same as Change 1 above.
- 3.1.29 Narrowing the Order Limits for the CO₂ Gathering Network to the northeast of Bran Sands, at Teesworks and at Seal Sands and Haverton Hill will increase the distance to noise sensitive receptors from any construction operations (as construction effects were measured from the Order Limits in the DCO Application).
- 3.1.30 The change is likely to result in a beneficial change during the construction phase, however, will not have an any change in the



previously predicted effects during the operation or decommissioning phases.

- 3.1.31 The environmental effects of the changes are summarised as:
 - reduced excavation of natural and potentially contaminated materials;
 - reduced dust generation;
 - reduced requirement for mobile generators;
 - reduced noise generation and potential impacts on SPA/Ramsar/SSSI;
 - reduced HGV and worker transport movements; and
 - increased distance to receptors through reduction in the Order Limits.
- 3.1.32 **Table 3-6** provides a summary of which stage the change will affect and the environmental effects of Change 6.



Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
6	Yes	No	No	Reduced excavation of natural and potentially contaminated materials. Reduced dust generation. Reduced requirement for mobile generators Reduced noise generation and potential impacts on SPA/Ramsar/SSSI Reduced HGV and worker transport movements Increased distance to receptors through reduction in the Order Limits.

Change 7: Change in the Means of Crossing the Tees Work No. 6 CO2 Gathering Network – Use of Existing Infrastructure

3.1.33 The introduction of a new option for the crossing of the Tees by use of the existing Sembcorp No 2 tunnel infrastructure by the CO₂ Gathering Network provides an alternative to the long tunnel (removed in Change 6) and the HDD (altered by Change 8 below). This change, compared to the options considered in the EIA, would remove the need for stockpiling and disposal and disposal of excavated spoil associated with tunnelling/boring. This would reduce HGV movements and the potential



for associated dust generation. Use of the existing tunnel infrastructure would also reduce noise impacts associated with boring / drilling. Whilst this change would mean that the Tees crossing would be constructed underground within the Sembcorp No. 2 tunnel, there would still be potential noise impacts associated with onshore pipe handling and stringing. These would be similar to those previously assessed as required for the construction of the above ground portions of the CO_2 Gathering Network at Navigator Terminals and along the Dabholm Gut. The effect of this change would therefore be neutral during the construction phase in relation to those topic chapters.

- 3.1.34 The use of the existing tunnel infrastructure is likely therefore to be beneficial overall, as it removes the requirement for an HDD crossing of the Tees but will need to be assessed in the construction, operation and decommissioning phases.
- 3.1.35 **Table 3-7** provides a summary of which stage the change will affect and the environmental effects of Change 7.



Table 3-7 - Summary of Effects Resulting from Change 7

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
7	Yes	Yes	Yes	Removal of requirement for HDD crossing of Tees for CO ₂ Gathering Network. Removal of drilling/excavation noise. Only pipe storage and handling on surface. Pipeline construction will be below ground in existing operational service tunnel. Update of Major Accidents and Hazards assessment required to include management of risks associated with the construction, operation and decommissioning of CO ₂ Gathering Network in Sembcorp No. 2 Tunnel.



Change 8: Change in the Means of Crossing the Tees - Work No. 6 CO2 Gathering Network – Change in the Trajectory and Direction of Drilling of HDD Bore

- This change affects Option 2 for the CO₂ Gathering Network crossing 3.1.36 the Tees using an HDD bore. Changing the trajectory of the HDD bore itself has no impact on the Order Limits. However, the change in trajectory requires a reversal of the direction of drilling of the HDD bore so that it commences from a launch point on land between Dabholm Gut and Bran Sands Lagoon and emerges at Navigator Terminals, rather than vice versa as currently assessed. This change will mean that the HDD drilling equipment will be located adjacent to the Bran Sands Lagoon. Whilst the Order Limits are not changing in this area, the operations adjacent to the Lagoon will change. The Lagoon is included within the Teesside and Cleveland Coast SSSI, SPA and Ramsar site for its use by birds. It will therefore be necessary to consider the environmental impacts of HDD operations in this location and whether there is the potential for them to cause noise or visual disturbance to bird species using the lagoon.
- 3.1.37 The reversal of the drilling directions means that pipe stringing operations will move from along the Dabholm Gut to North Tees along the northern edge of Seal Sands Road. This change will require the noise assessment to be reviewed and may also require measures to avoid disruption associated with the pipeline crossing over Seal Sands Road.
- 3.1.38 The change will also mean that traffic movements for HDD operations and pipe stringing will change from North Tees to South Tees (and *vice versa*). The change in the number of personnel on each side of the Tees is unlikely to be significant, however, the transportation assessment will be reviewed to test the significance of this change.
- 3.1.39 The effect of this change is anticipated to be neutral during the construction phase provided appropriate noise and visual controls are applied to protect the birds using the lagoon, and there would not be any change in the previously predicted effects during the operation or decommissioning phases.
- 3.1.40 **Table 3-8** provides a summary of which stage the change will affect and the environmental effects of Change 8.



Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
8	Yes	Νο	No	Movement of HDD launch point from Navigator Terminals to the north bank of the Dabholm Gut will increase the potential for noise and visual disturbance of SPA/Ramsar bird species using Bran Sands lagoon. Changes in HGV and worker traffic movements. Pipe stringing across Seal Sands Road has potential for disruption to road traffic. Potential additional noise impacts from pipe stringing to the north of Seal Sands Rd.

Change 9: Reduction in the Order Limits for Work No. 9 Temporary Construction and Laydown Areas

- 3.1.41 This change will increase the distance to noise sensitive receptors from any operations in the affected laydown areas (as construction effects were measured from the Order Limits in the DCO Application).
- 3.1.42 The environmental effects of the changes will alter as a result of the increased distance receptors through reduction in the Order Limits at laydown areas. The change is therefore likely to result in a beneficial change during



the construction phase, however, will not have any change in the previously predicted effects during the operation or decommissioning phases.

3.1.43 **Table 3-9** provides a summary of which stage the change will affect and the environmental effects of Change 9.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
9	Yes	No	No	Increased distance to receptors through reduction in the Order Limits at laydown areas

Table 3-9 - Summary of Effects Resulting from Change 9

Change 10: Minor Increase in the Order Limits for Work No. 9 Temporary Construction and Laydown Areas

- 3.1.44 This change will slightly increase the size of the proposed laydown area off Seaton Carew Road and therefore decrease slightly the distance to noise sensitive receptors from construction activities (as construction effects were measured from the Order Limits in the DCO Application). However, due to the small size of the change the effect is likely to be negligible.
- 3.1.45 The environmental effects of the changes will alter as a result of the increased distance receptors through an increase in the Order Limits at temporary construction and laydown areas. The change is likely to be neutral during the construction phase, however, this change will not alter the previously predicted effects during the operation or decommissioning phases.
- 3.1.46 **Table 3-10** provides a summary of which stage the change will affect and the environmental effects of Change 10.



 Table 3-10 - Summary of Effects Resulting from Change 10

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
10	Yes	Νο	Νο	Insignificant increase in distance to receptors through very small increase in the Order Limits.

Change 11: Change in Work Number for Pipe Stringing

- 3.1.47 As this change involves changing the Work No. for pipe stringing on Teesworks land there will be no change in the pipe stringing operations proposed and assessed in this area.
- 3.1.48 There will not be any change in the previously assessed effects during the construction, operation or decommissioning phases. The environmental effects of the changes will not change the effects reported in the ES.
- 3.1.49 **Table 3-11** provides a summary of which stage the change will affect and the environmental effects of Change 11.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
11	No	No	No	No change in effects reported in the Environmental Statement.

Table 3-11 - Summary of Effects Resulting from Change 11

Change 12: Addition of part of Seal Sands Road to Work No. 10 Access and Highway Improvements.

3.1.50 This change involves changing the Work No. applicable to Seal Sands Road, but there will be no change in the proposed use of Seal Sands Road for the Proposed Development.



- 3.1.51 There will not be any change in the previously assessed effects during the construction, operation or decommissioning phases. The environmental effects of the changes will not change the effects reported in the ES.
- 3.1.52 **Table 3-12** provides a summary of which stage the change will affect and the environmental effects of Change 12.

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
12	No	No	No	No change in effects reported in the Environmental Statement.

Table 3-12 - Summary of Effects Resulting from Change 12

Change 13: Removal of small parcels of land from Work No. 10 Access and Highway Improvements

- 3.1.53 These changes will result in small parcels of land in the Seal Sands area and from STDC land from Work No. 10 being removed from the Order Limits, as they are no longer required.
- 3.1.54 The environmental effects of the changes will alter as a result of the increased distance receptors through a reduction in the Order Limits at Seal Sands and Teesworks. The change will be neutral during the construction phase. The change will also not result in any change in the previously assessed effects during the operation or decommissioning phases.
- 3.1.55 **Table 3-13** provides a summary of which stage the change will affect and the environmental effects of Change 13.



Table 3-13 - Summary of Effects Resulting from Change 13

Change	Effect on Construction	Effect on Operation	Effect on Decommissioning	Summary of Potential Changes in from those reported in Environmental Statement
13	Yes	No	No	Increased distance to receptors through reduction in the Order Limits at Seal Sands and Teesworks.

3.1.56 Taking into account the nature of the proposed changes and the potential changes to the environmental assessments identified in Tables 3-1 to 3-13 above, as well as consequential changes to the ES to reflect the Proposed Development with the changes, the Applicants have identified various updates to the ES that will be required if the changes are taken forward. These potential updates to the ES chapters are set out in **Table 3-14**.

Change / Map Reference	Chapter 1 Introduction	Chapter 2 Assessment Methodology	Chapter 3 Description of the Existing Environment	Chapter 4 Proposed Development	Chapter 5 Construction Programme and Management and Appendix 5A CEMP	Chapter 6 Alternatives and Design Evolution	Chapter 7 Legislative Context and Planning Policy	Chapter 8 Air Quality	Chapter 9 Surface Water , Flood Risk and Water Resources	Chapter 10 Geology and Contaminated Land	Chapter 11 Noise and Vibration	Chapter 12 Terrestrial Ecology	Chapter 13 Aquatic Ecology and Nature Conservation	Chapter 14 Marine Ecology and Nature Conservation	Chapter 15 Ornithology	Chapter 16 Traffic and Transportation	Chapter 17 Landscape and Visual Amenity	Chapter 18 Archaeology and Cultural Heritage	Chapter 19 Marine Heritage	Chapter 20 Socio-economics	Chapter 21 Climate Change	Chapter 22 Major Accidents and Natural Disasters	Chapter 23 Population and Human Health	Chapter 24 Cumulative and Combined Effects	Chapter 25 Summary of Significant Effects	ES Figures
1	\checkmark	-	~	\checkmark	~	\checkmark	Update to	\checkmark	 	-	~	~	-		\checkmark	 	~	-	-	-		-	-	~	-	~
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Table 3-14 – Environmental Statement documents which will require update as a result of the proposed Changes.



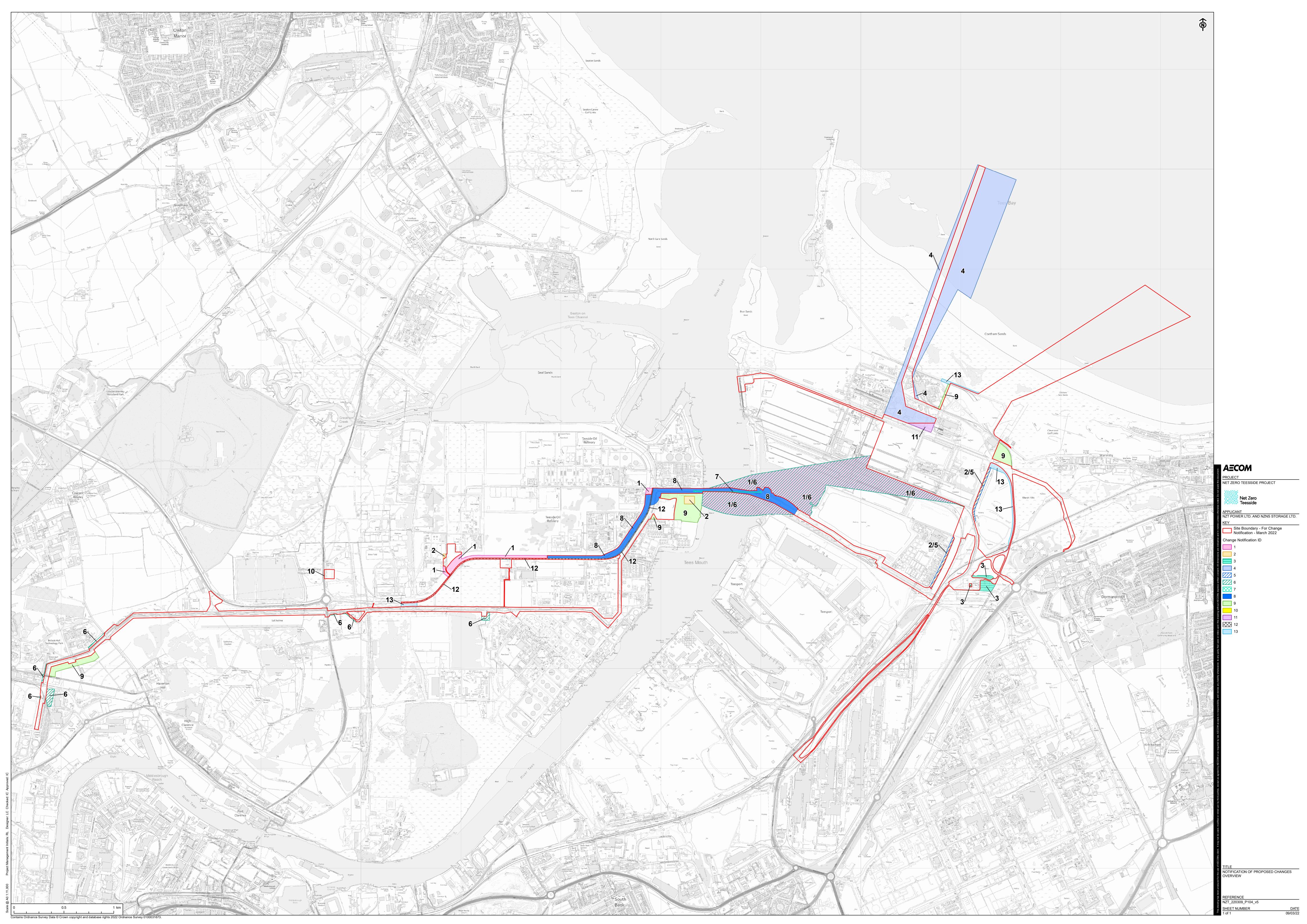


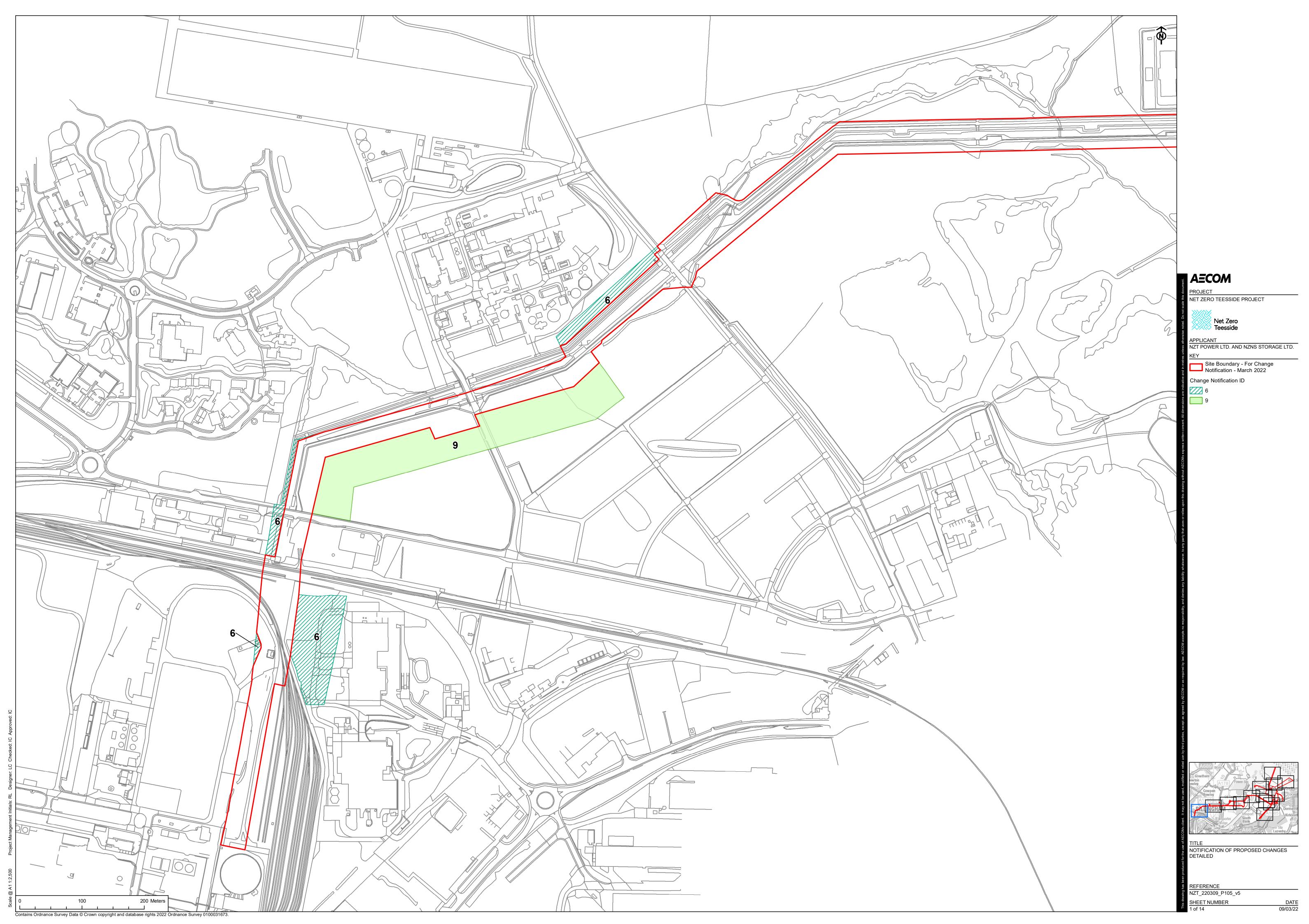
4.0 INDICATIVE PROGRAMME

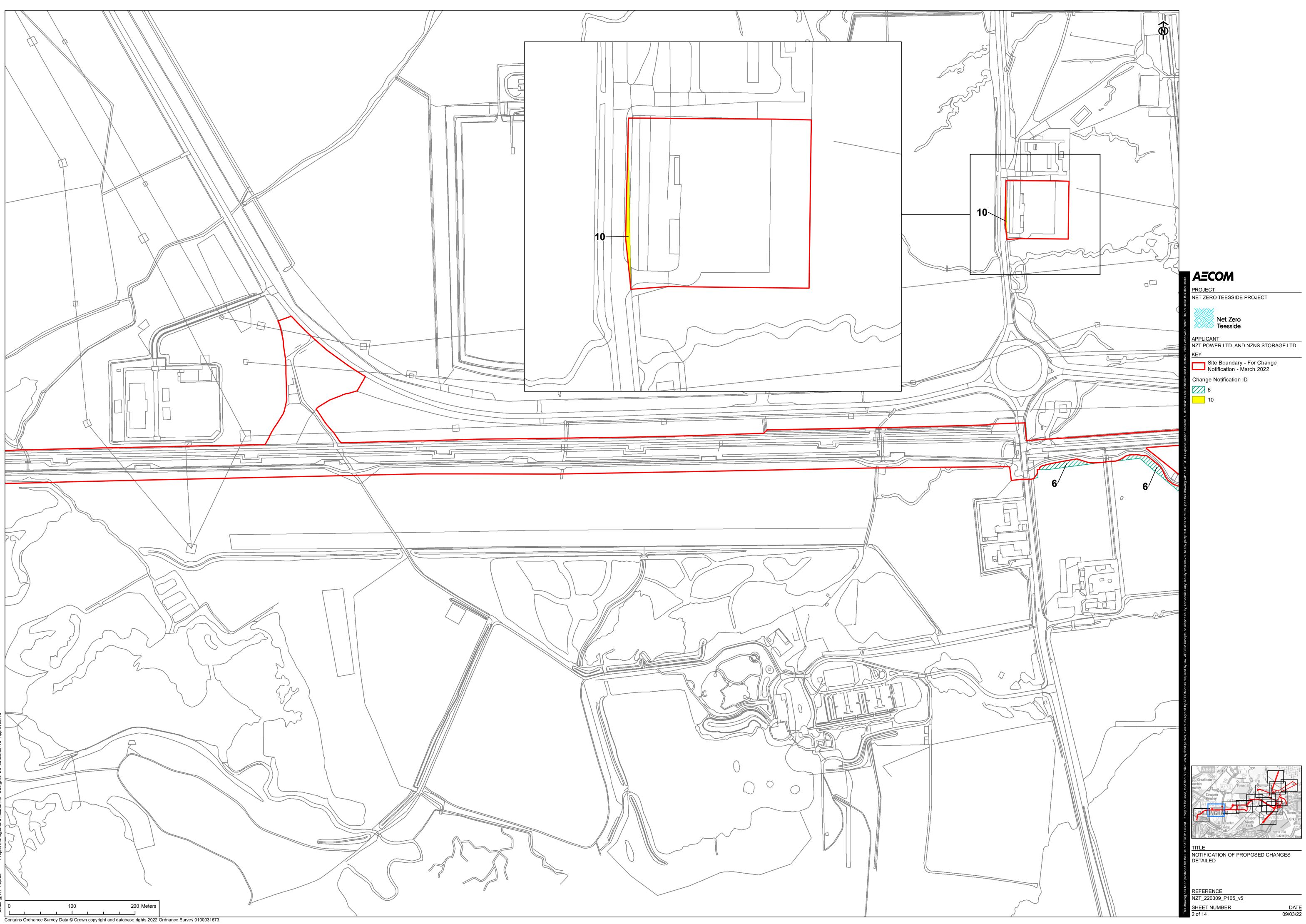
- 4.1.1 In accordance with Advice Note 16, this document sets out the steps relating to submitting the formal change request to the ExA.
- 4.1.2 For additional clarity, the programme dates for the relevant steps contained in Advice Note 16 are set out below:
 - Step 1 Notification of proposed application to ExA: completed on 21 February 2022.
 - Step 2 ExA to provide advice: completed on 24 February 2022.
 - Step 3 Non-statutory consultation begins: 10 March 2022 (consultation ends 14 April 2022).
 - Step 4 Formal change request submitted to ExA: 28 April 2022.
 - Step 5. ExA decision on whether to accept the changes: at the ExA's discretion

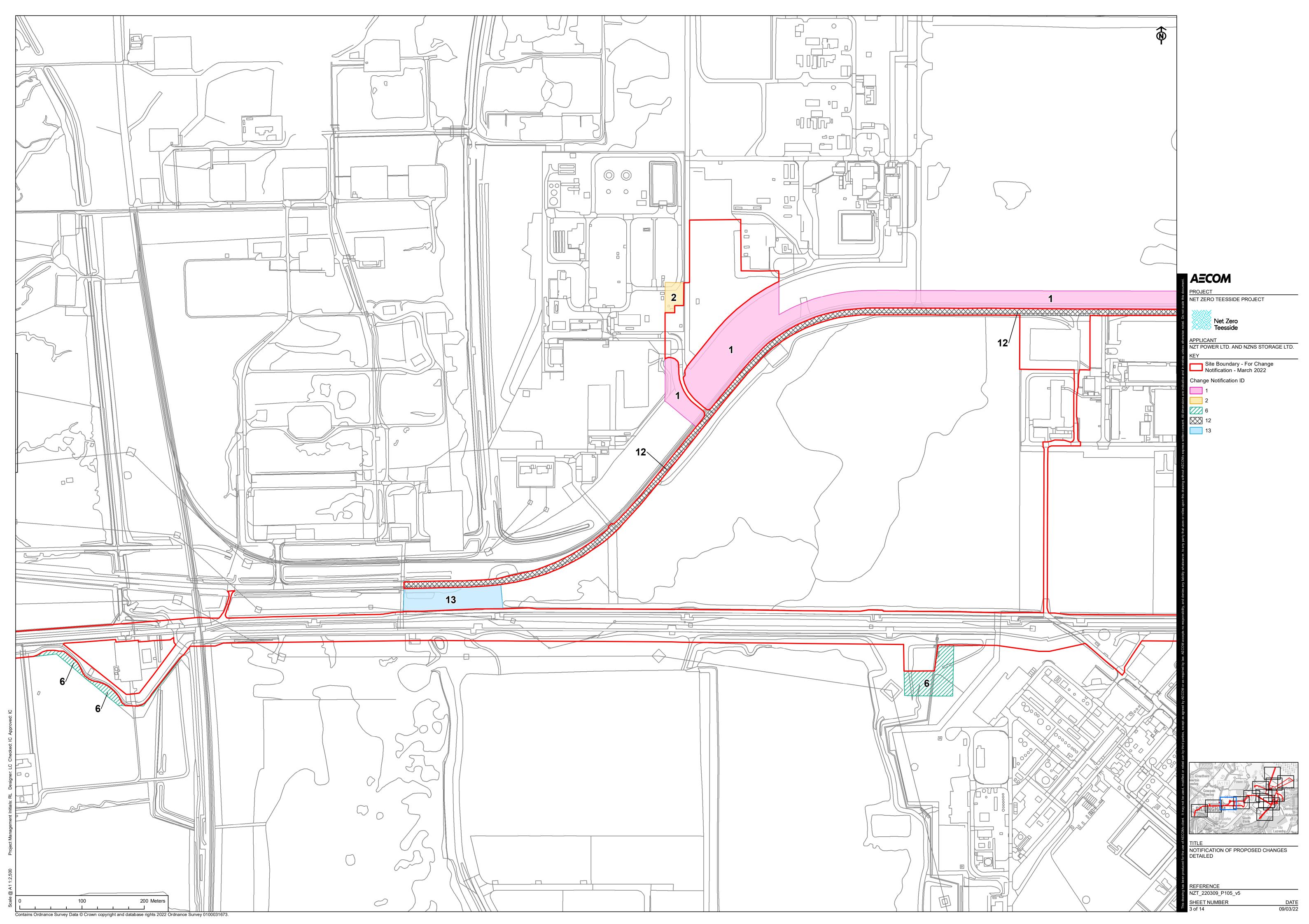


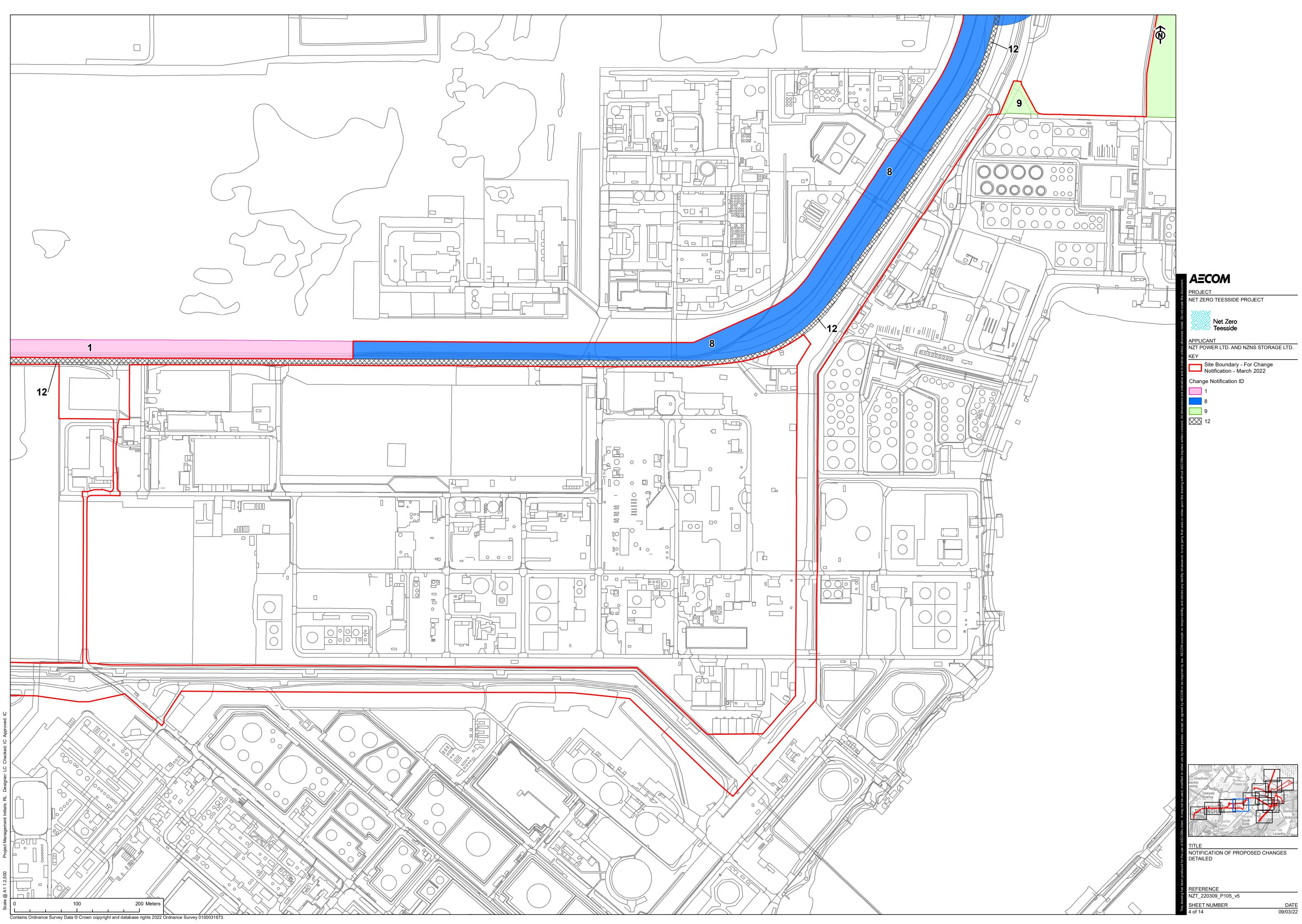
APPENDIX A: PLANS SHOWING ORDER LIMITS UPDATES AND LOCATION OF CHANGES

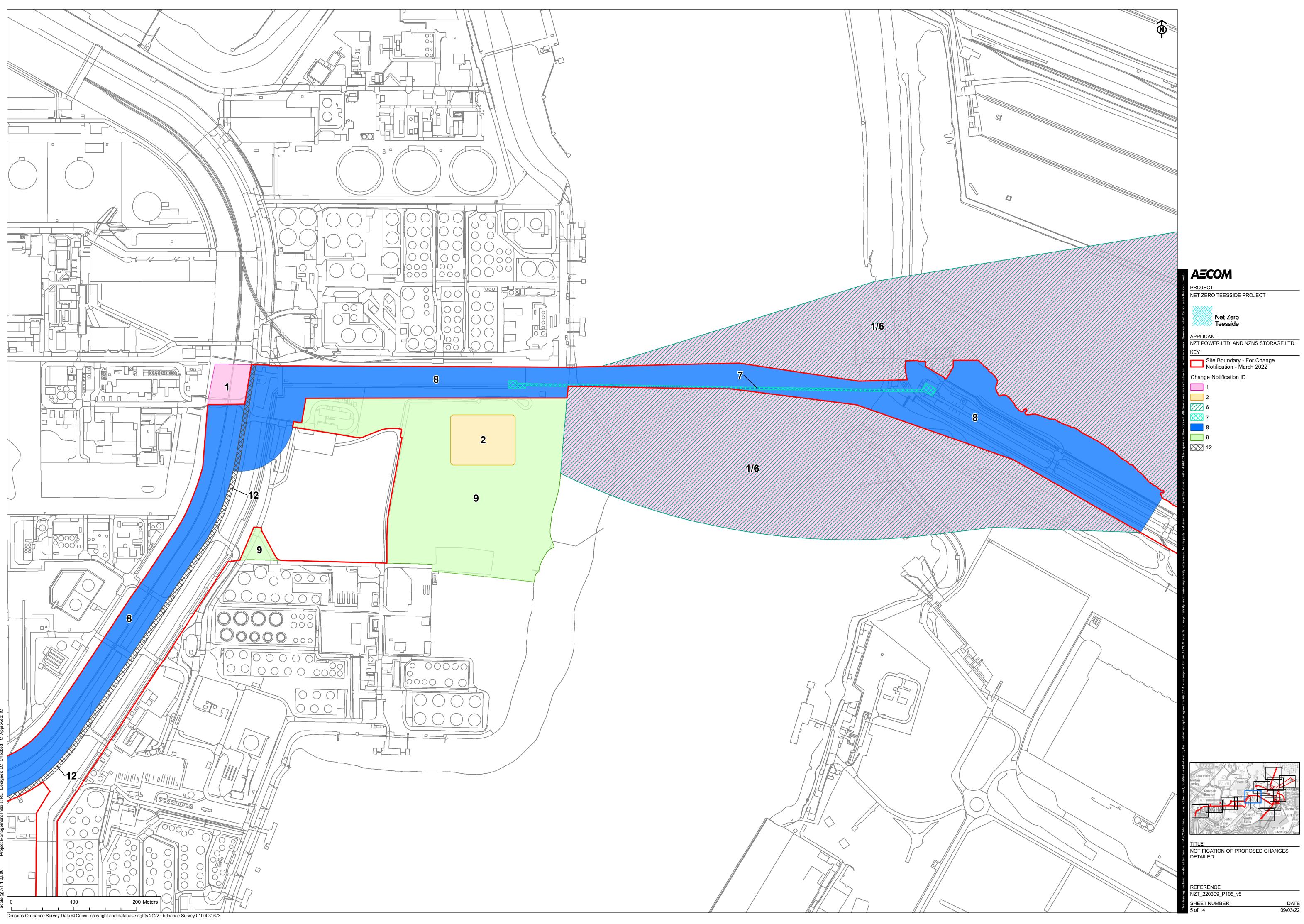


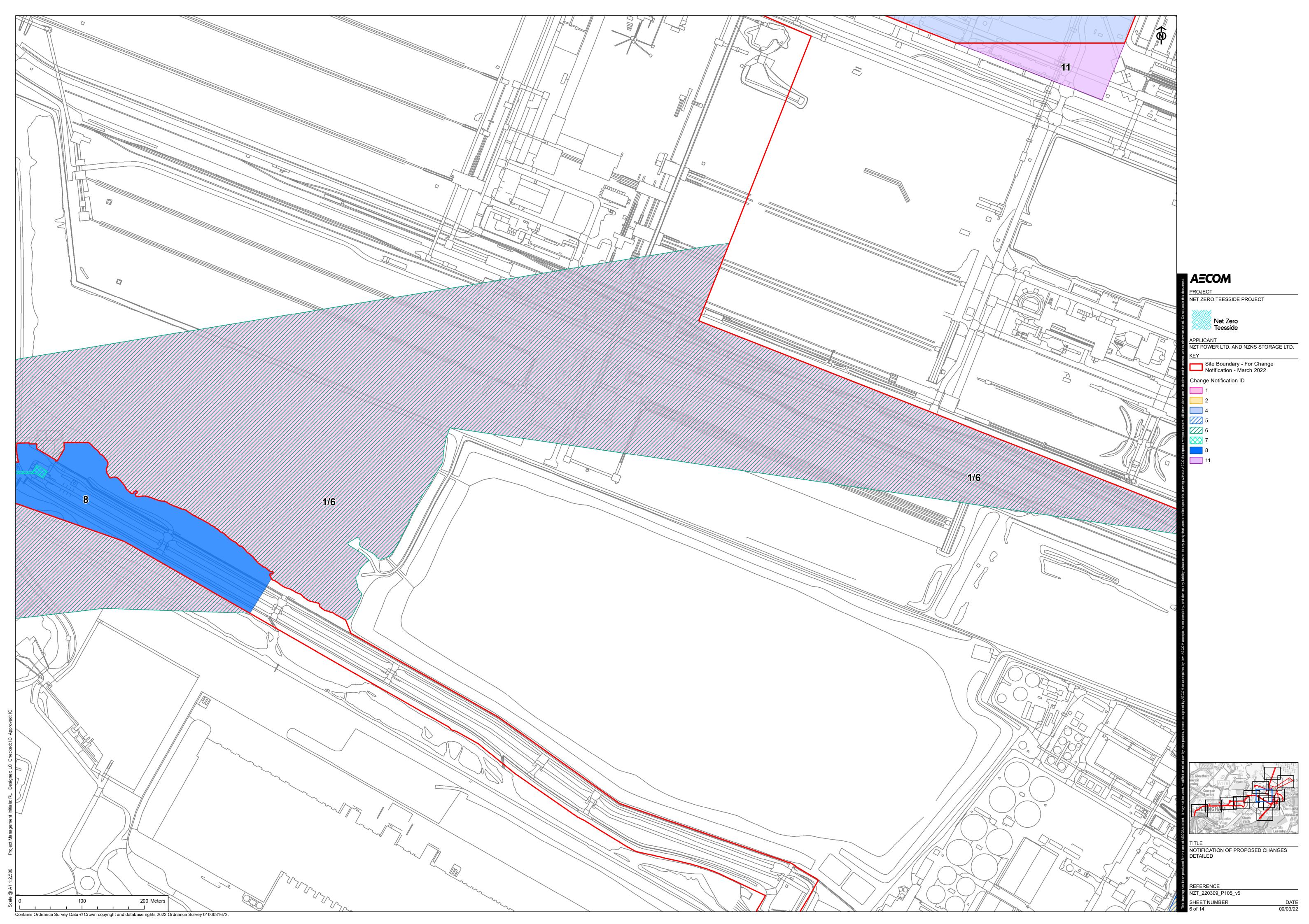


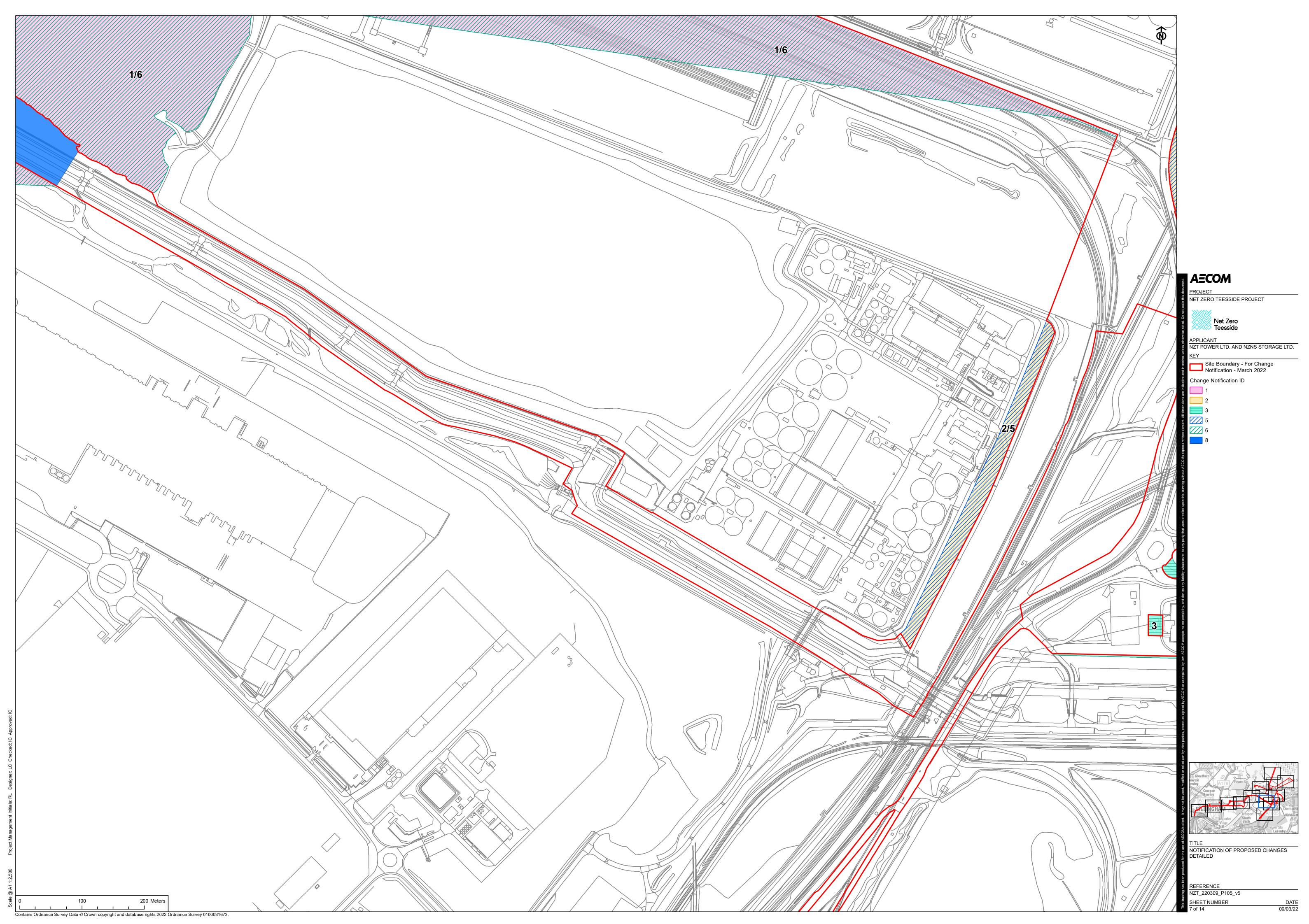


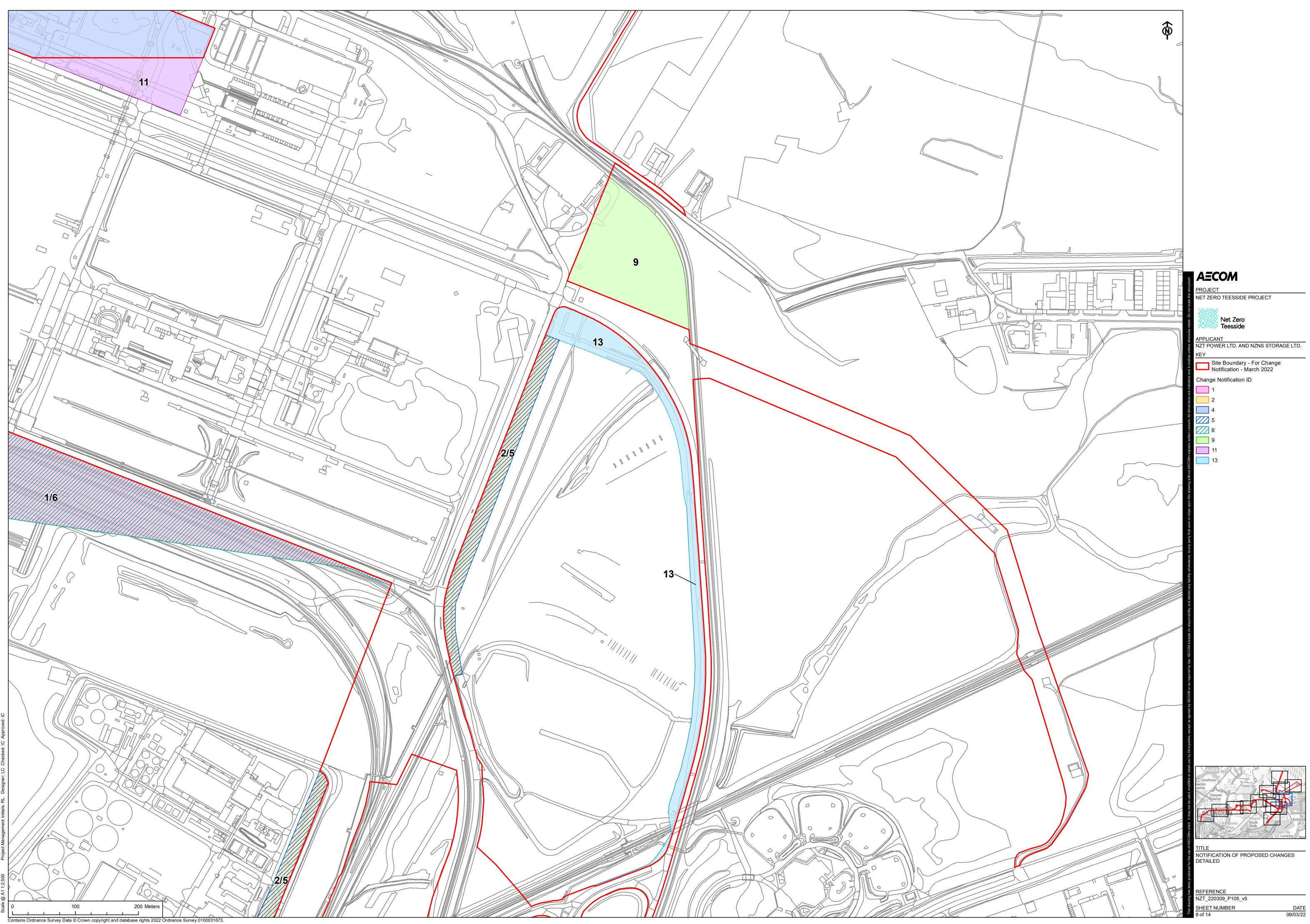




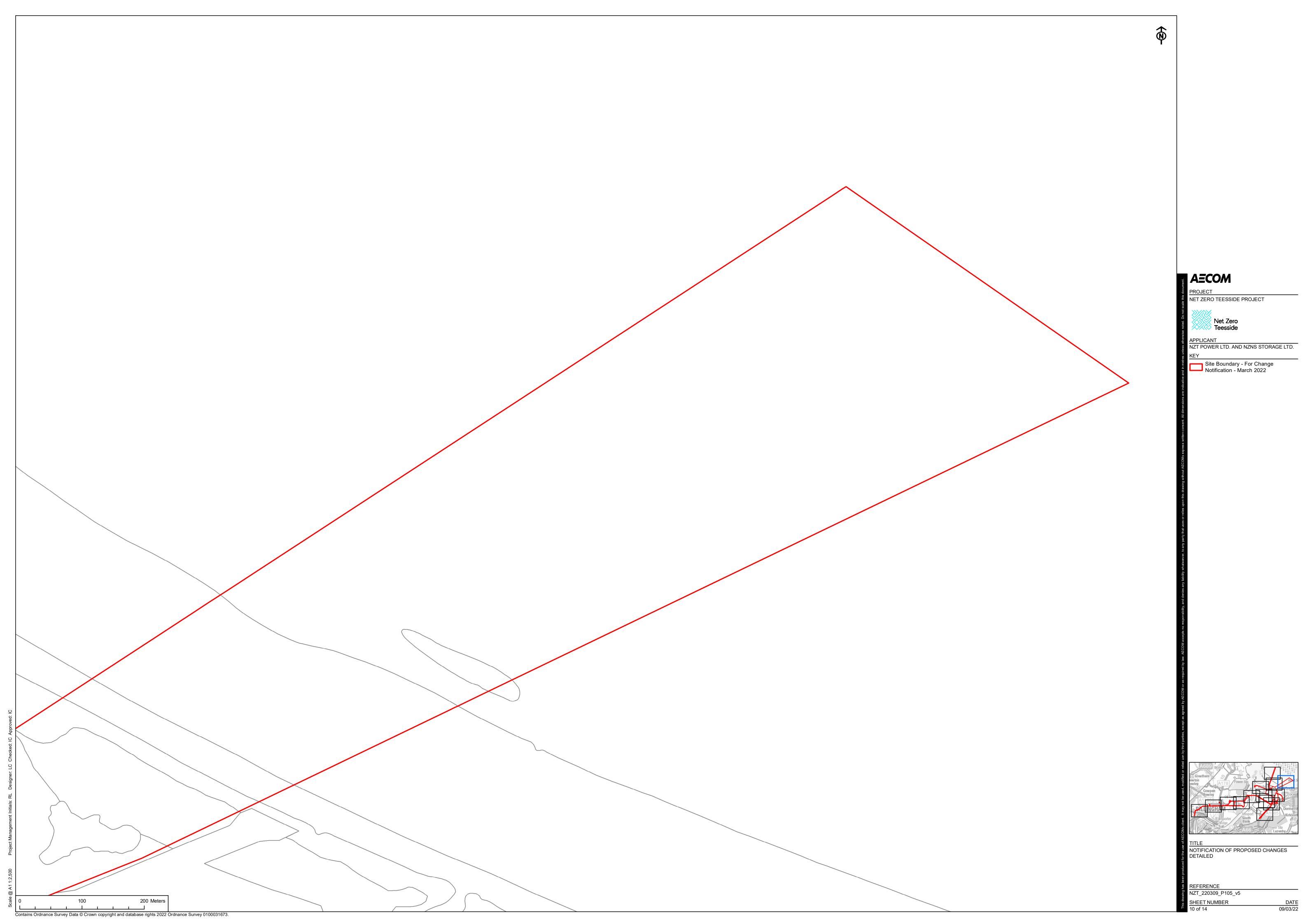


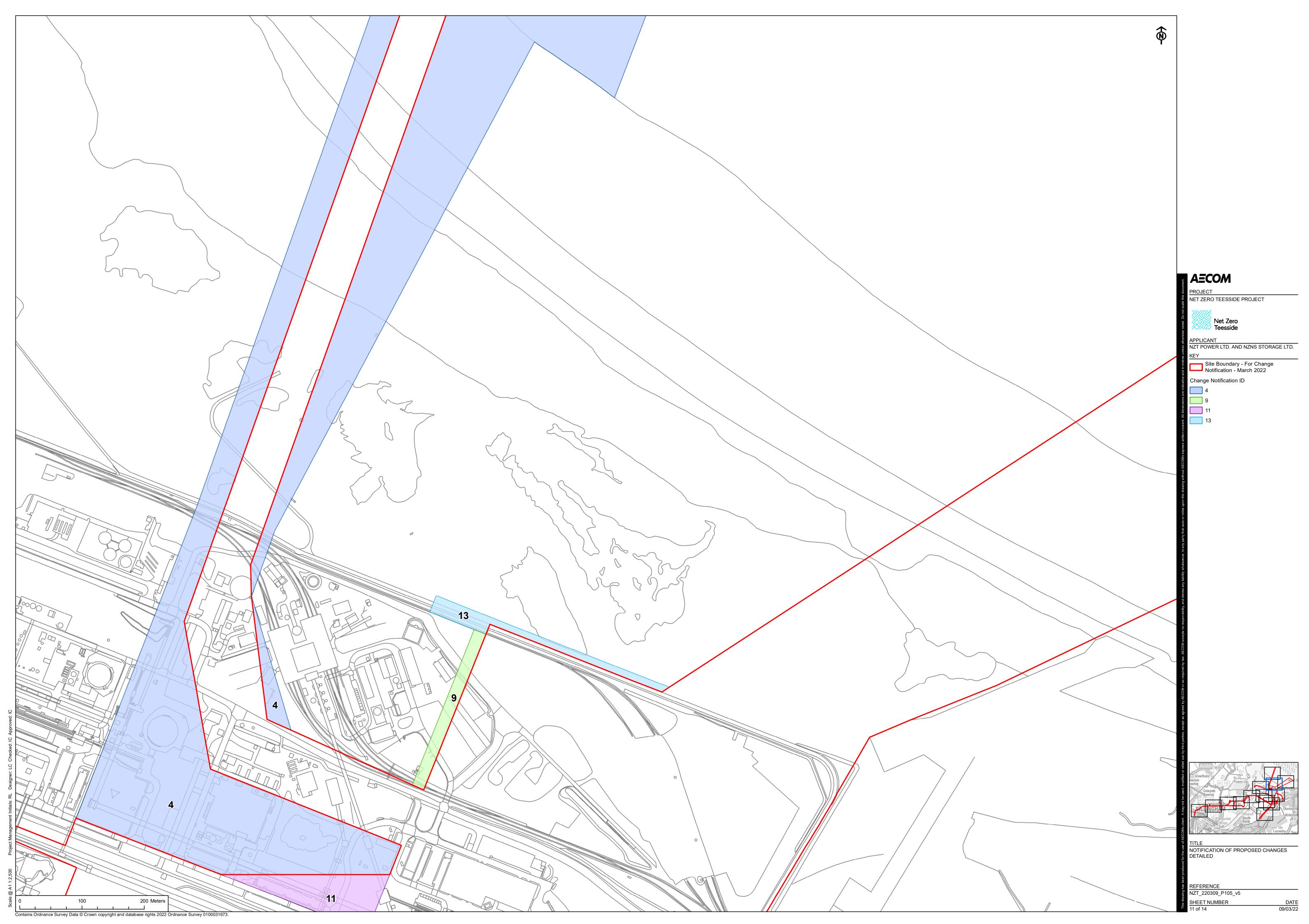




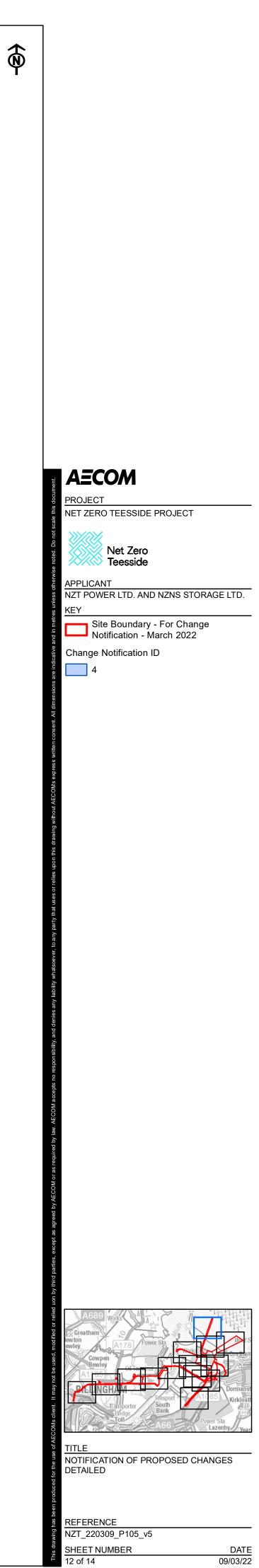












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