

SCHEDULES

SCHEDULE 1

Article 2

AUTHORISED DEVELOPMENT

In the administrative area of The North Yorkshire Council a nationally significant infrastructure project as defined in sections 14(1)(a) and 15 of the 2008 Act and associated development under section 115(1)(b) of the 2008 Act, comprising—

Work No. 1— extension to an existing generating station and carbon capture plant comprising—

- (a) **Work No. 1A**— works to modify and upgrade the existing generating station water pre-treatment plant comprising updated technology retrofitted to the existing four sedimentation tanks;
- (b) **Work No. 1B**— works to modify, upgrade and extend the existing generating station cooling water system including—
 - (i) modifications, upgrades and extension to existing generating station cooling water pumps, and reconfiguration of discharge manifold;
 - (ii) works for the distribution and usage of cooling water within the carbon capture plant and supporting systems including—
 - (aa) supply lines to the carbon capture plant;
 - (bb) filtering equipment and heat exchangers;
 - (cc) biocide / chemical dosing;
 - (dd) pipework connections from the reconfigured discharge manifold to heat exchangers and other components of the carbon capture plant; and
 - (iii) return into the existing generating station cooling infrastructure comprising return lines from the carbon capture plant to the existing generating station cooling towers;
- (c) **Work No. 1C**— works to modify, upgrade and extend the existing generating station boilers and turbines for the carbon capture plant process steam connection comprising—
 - (i) **Work No. 1C(i)**— works in connection with Unit 1 of the existing generating station including—
 - (aa) extraction of steam from Unit 1 of the existing generating station including either or both of (i) interconnection through a boiler tap out of the hot reheat section of the host boiler from Unit 1 of the existing generating station, and (ii) interconnection into the host turbine from Unit 1 of the existing generating station;
 - (bb) modifications to the boiler and/or turbine from Unit 1 of the existing generating station;
 - (cc) pipelines and pipeline supports carrying steam from Unit 1 of the existing generating station to the combined power turbines and/or pressure reducing de-superheating stations including drains and flash vessels; and
 - (dd) return of condensate from the carbon capture plant to Unit 1 of the existing generating station including pipelines and pipeline supports carrying

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- condensate to Unit 1 of the existing generating station interconnection back into the condensate system within Unit 1 of the existing generating station;
- (ii) **Work No. 1C(ii)**— works in connection with Unit 2 of the existing generating station including—
- (aa) extraction of steam from Unit 2 of the existing generating station including either or both of (i) interconnection through a boiler tap out of the hot reheat section of the host boiler from Unit 2 of the existing generating station and (ii) interconnection into the host turbine from Unit 2 of the existing generating station;
 - (bb) modifications to the boiler and/or turbine from Unit 2 of the existing generating station;
 - (cc) pipelines and pipeline supports carrying steam from Unit 2 of the existing generating station to the combined power turbines and/or pressure reducing de-superheating stations including drains and flash vessels; and
 - (dd) return of condensate from the carbon capture plant to Unit 2 of the existing generating station including pipelines and pipeline supports carrying condensate to Unit 2 of the existing generating station and interconnection back into the condensate system- within Unit 2 of the existing generating station;
- (iii) **Work No. 1C(iii)**— processing of steam from Unit 1 and Unit 2 of the existing generating station by the carbon capture plant including—
- (aa) up to two combined power steam turbines and generator sets including all balance of plant and ancillaries;
 - (bb) up to two combined power steam turbine buildings;
 - (cc) up to two pressure reducing de-superheating stations;
 - (dd) up to two pressure reducing de-superheating stations buildings; and
 - (ee) a new overground pipe bridge structure carrying steam, return condensate and connecting pipework including drainage points between the combined power steam turbines and the carbon capture plant;
- (d) **Work No. 1D**— up to two carbon dioxide capture plants for Unit 1 and Unit 2 of the existing generating station comprising—
- (i) **Work No. 1D(i)**— absorber and quench system for the carbon capture plant for Unit 1 of the existing generating station including—
 - (aa) one quench column; and
 - (bb) one absorber column;
 - (ii) **Work No. 1D(ii)**— absorber and quench system for the carbon capture plant for Unit 2 of the existing generating station including—
 - (aa) one quench column; and
 - (bb) one absorber column;
 - (iii) **Work No. 1D(iii)**— solvent regeneration system and rich solvent / lean solvent heat exchangers for the carbon capture plant for Unit 1 of the existing generation station including—
 - (aa) up to two regenerators;
 - (bb) main process and service rack including rich solvent / lean solvent heat exchangers; and

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- (cc) drums and vessels;
- (iv) **Work No. 1D(iv)**— solvent regeneration system and rich solvent / lean solvent heat exchangers for the carbon capture plant for Unit 2 of the existing generation station including—
 - (aa) up to two regenerators;
 - (bb) main process and service rack including rich solvent / lean solvent heat exchangers; and
 - (cc) drums and vessels;
- (v) **Work No. 1D(v)**— supporting infrastructure for the carbon capture plant for Unit 1 of the existing generating station including—
 - (aa) up to two gas / gas heat exchangers;
 - (bb) up to four flue gas booster fans;
 - (cc) solvent pumps; and
 - (dd) monitoring and metering equipment;
- (vi) **Work No. 1D (vi)**— supporting infrastructure for the carbon capture plant for Unit 2 of the existing generating station including—
 - (aa) up to two gas / gas heat exchangers;
 - (bb) up to four flue gas booster fans;
 - (cc) solvent pumps; and
 - (dd) monitoring and metering equipment;
- (vii) **Work No. 1D (vii)**— common solvent storage and make-up system infrastructure for the carbon capture plants for Unit 1 and Unit 2 of the existing generating station comprising up to four bunded solvent storage compounds;
- (viii) **Work No. 1D (viii)**— common supporting infrastructure including—
 - (aa) a wastewater treatment plant;
 - (bb) up to eight chemical storage areas;
 - (cc) road tanker loading and unloading areas;
 - (dd) all firefighting systems including up to four fire water tanks; and
 - (ee) works connecting Work Nos. 1D(i) to 1D(vii) to Work No. 1E and the existing generating station;
- (e) **Work No. 1E**— carbon dioxide processing and compression plant comprising—
 - (i) **Work No. 1E(i)**— carbon dioxide processing and compression plant for the carbon capture plant for Unit 1 of the existing generating station including—
 - (aa) up to eight carbon dioxide gas compressors enclosed in up to four buildings; and
 - (bb) up to two carbon dioxide dryers and associated treatment and exporting plant including filters, conditioners, recirculating compressors, heated safety valves, oxygen removal equipment, hydrogen generation, hydrogen storage, gas detection safety systems, metering and system process vents;
 - (ii) **Work No. 1E (ii)**— carbon dioxide processing and compression plant for the carbon capture for Unit 2 of the existing generating station including—
 - (aa) up to eight carbon dioxide gas compressors enclosed in up to four buildings; and

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- (bb) up to two carbon dioxide dryers and associated treatment and exporting plant including filters, conditioners, recirculating compressors, heated safety valves, oxygen removal equipment, hydrogen generation, hydrogen storage, gas detection safety systems, metering and system process vents;
- (iii) **Work No. 1E (iii)**— one carbon dioxide main vent stack and one silencer for the carbon capture plant for Unit 1 of the existing generating station;
- (iv) **Work No. 1E (iv)**— one carbon dioxide main vent stack and one silencer for the carbon capture plant for Unit 2 of the existing generating station;
- (f) **Work No. 1F**— integral electrical connections within the existing generating station and carbon capture plant including—
 - (i) upgrade to the existing 400 kV National Grid substation;
 - (ii) modifications and upgrade to the 132 kV air insulated switchgear including but not limited to circuit breakers, busbar disconnectors, and earth switches;
 - (iii) decommissioning and removal of existing oil-filled cabling, and installation of upgraded cabling as part of the connection from the 132 kV air insulated switchgear in Work No. 1F(ii) to the new distribution voltage infrastructure- in Work No. 1F(v);
 - (iv) destringing, upgrading and restringing of existing overhead lines as part of the connection from the switchgear in Work No. 1F(ii) to the new distribution voltage infrastructure in Work No. 1F(v);
 - (v) installation of new distribution voltage infrastructure including associated HV and LV transformers and distribution voltage cabling to and from the switchroom buildings and the combined power turbines;
 - (vi) installation of up to two combined power turbine power control cubicles and associated generator step-up transformers;
 - (vii) installation of up to thirty switchroom buildings; and
 - (viii) installation of facilities for storage of excess electrical power and / or for electrical load balancing.

Work No. 2— infrastructure to transport compressed carbon dioxide from Work No. 1E to storage and transport infrastructure operated by the onshore carbon pipeline operator comprising one of the following—

- (a) a new carbon dioxide delivery terminal compound and pipelines including—
 - (i) a new underground or aboveground carbon dioxide pipeline connecting Work No. 1E with this Work No. 2(a);
 - (ii) a pigging station;
 - (iii) safety valves;
 - (iv) monitoring and metering equipment;
 - (v) filters;
 - (vi) system process vents;
 - (vii) a new underground or aboveground carbon dioxide pipeline connecting this Work No. 2(a) to a terminal point within the Order limits;
 - (viii) trenching works; and
 - (ix) pipeline field marker posts and cathodic protection test / transformer rectifier unit(s);
or
- (b) a new carbon dioxide delivery pipeline including—

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- (i) a new underground or aboveground carbon dioxide pipeline connecting Work No. 1E to a terminal point within the Order limits;
- (ii) trenching works;
- (iii) pipeline field marker posts and cathodic protection test / transformer rectifier unit(s); and
- (iv) monitoring and metering equipment.

Work No. 3— supporting works in connection with and in addition to Work Nos. 1, 2 and 5 including—

- (a) a new pipeline or pipelines connecting Work Nos. 1A and 1B to the existing generating station's on-site purge chamber;
- (b) surface water collection and drainage pipe works to discharge to cooling towers;
- (c) modification to and refurbishment of existing electrostatic precipitators of Unit 1 and Unit 2 of the existing generating station;
- (d) cable connection back to existing generating station central control room;
- (e) service and pipeline connections for supply of heat to wastewater treatment plant;
- (f) replacement of the main generator transformers for Unit 1 and Unit 2 of the existing generating station;
- (g) other minor auxiliary infrastructure required to support the carbon capture process;
- (h) ground raising and ground preparation works;
- (i) electricity, water, wastewater, control and telecommunications and other services;
- (j) trenching works;
- (k) below ground drainage works;
- (l) security and site lighting infrastructure, including cameras, perimeter fencing and lighting columns;
- (m) tree and hedge removal;
- (n) hard and soft landscaping including tree planting, ecological mitigation, temporary and permanent fencing and other boundary treatments;
- (o) civil works and support structures;
- (p) works required in order to protect existing utilities infrastructure;
- (q) internal roadways, car parking, pedestrian network, cycle parking and hardstanding; and
- (r) site drainage and waste management infrastructure, including relocation of existing infrastructure as required.

Work No. 4— works to facilitate the safe entry and navigation of construction vehicles for the purpose of construction access to Work Nos. 1 to 5 and 7 including—

- (a) road modifications;
- (b) temporary removal or reinstatement of structures, features and landscaping; and
- (c) temporary modification and subsequent reinstatement of external parts of structures and buildings.

Work No. 5— temporary construction laydown areas including—

- (a) car parking;
- (b) areas of hardstanding;
- (c) laydown areas for storage including of plant, equipment, materials and topsoil;

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- (d) site and welfare offices, fabrication areas and workshops; and
- (e) electricity, water, waste water and telecommunications connections.

Work No. 6— habitat provision area including—

- (a) soft landscaping including planting;
- (b) landscape and biodiversity enhancement measures; and
- (c) security fencing, gates, boundary treatment and other means of enclosure.

Work No. 7— works to create a floodplain compensation area including—

- (a) partial removal of existing grassland or vegetation;
- (b) earthworks to include excavation and movement of material within the floodplain compensation area; and
- (c) landscape and habitat reinstatement and enhancement measures.

Work No. 8— works to facilitate the delivery of abnormal indivisible loads to the site comprising—

- (a) **Work No. 8A**— diversion of existing electrical 11 kV overhead lines including—
 - (i) removal or realignment of sections of existing electrical 11 kV overhead lines;
 - (ii) installation of new sections of electrical 11 kV overhead lines or new sections of electrical 11 kV underground cabling;
 - (iii) installation of new, or relocation, or replacement, or removal of existing, electrical overhead line poles;
 - (iv) removal of existing infrastructure for detecting and interrupting transient faults on the electrical network;
 - (v) construction of new joint bays to allow connection of new electrical 11 kV underground cabling with existing electrical 11 kV underground cabling;
 - (vi) civil works including excavation, trenching, and reinstatement;
 - (vii) works required in order to protect existing utilities infrastructure;
 - (viii) vegetation removal and landscape and habitat reinstatement measures;
 - (ix) works to facilitate construction access including temporary road modifications and temporary removal or reinstatement of structures, features and landscaping; and
 - (x) temporary construction laydown area.
- (b) **Work No. 8B**— diversion of existing telecommunication overhead lines including—
 - (i) removal or realignment of sections of existing telecommunication overhead lines;
 - (ii) installation of new sections of telecommunication overhead lines;
 - (iii) installation of new, or relocation or replacement, of existing, telecommunication overhead line poles;
 - (iv) general civil works;
 - (v) works required in order to protect existing utilities infrastructure;
 - (vi) vegetation removal and landscape and habitat reinstatement measures;
 - (vii) works to facilitate construction access including temporary road modifications and temporary removal or reinstatement of structures, features and landscaping; and
 - (viii) temporary construction laydown area.

In connection with and in addition to Work Nos. 1 to 8 further associated development including—

- (a) surface water drainage systems, storm water attenuation systems including storage basins, oil water separators, including channelling and culverting and works to existing drainage systems;
- (b) electrical, gas, water, foul water drainage and telecommunications infrastructure connections and works to, and works to alter the position of, such services and utilities connections;
- (c) hard standing and hard landscaping;
- (d) biodiversity measures;
- (e) closed circuit television cameras and columns and other security measures;
- (f) site establishments and preparation works including site clearance (including vegetation removal, demolition of existing buildings and structures); earthworks (including soil stripping and storage and site levelling) and excavations; the alteration of the position of the services and utilities; and works for the protection of buildings and land;
- (g) temporary construction laydown areas and contractor facilities, including materials and plant storage and laydown areas; generators; concrete batching facilities; vehicle and cycle parking facilities; pedestrian and cycle routes and facilities; offices and staff welfare facilities; security fencing and gates; external lighting; roadways and haul routes; wheel wash facilities; and signage;
- (h) vehicle parking and cycle storage facilities;
- (i) accesses, roads and pedestrian and cycle routes;
- (j) tunnelling, boring and drilling works,

and further associated development comprising such other works or operations as may be necessary or expedient for the purposes of or in connection with the construction, operation and maintenance of the authorised development but only within the Order limits and insofar as they are unlikely to give rise to any materially new or materially different environmental effects which are worse than those assessed in the environmental statement.