

Agenda Item	<b>6.7</b>
Report No	<b>PLN/037/18</b>

## THE HIGHLAND COUNCIL

**Committee:** North Planning Applications Committee

**Date:** 5 June 2018

**Report Title:** 17/04919/FUL: Dounreay Site Restoration Limited  
Dounreay Nuclear Research Establishment, Dounreay, Thurso

**Report By:** Area Planning Manager – North

### 1. Purpose/Executive Summary

**Description:** Dounreay Phase 3 (2018 - Interim End State); comprising of the construction of a transit flask facility, shaft and silo waste retrieval facilities, a low level waste pits retrieval temporary building and a facility to repackage waste, demolition of all redundant buildings, land remediation, landscaping, dismantling of 3 nuclear reactors and continuation of ancillary infrastructure decommissioning works

**Ward:** 02 - Thurso and North West Caithness

**Development category:** Major

**Reason referred to Committee:** Major development

All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

### 2. Recommendation

Members are asked to agree the recommendation to **GRANT** planning permission as set out in section 12 of the report.

## 1. INTRODUCTION

- 1.1 Dounreay was established as the research and development site for the UK's fast reactor programme in 1955. Operated by the United Kingdom Atomic Energy Authority (UKAEA) the site had three reactors over the course of its operational life: the first of which, the Dounreay Materials Testing Reactor (DMTR), was closed in 1968; the Dounreay Fast Reactor (DFR), designed to demonstrate the principle of a liquid cooled fast reactor, which closed in 1977, and finally; the Prototype Fast Reactor (PFR), which was designed to test fuel, coolant and equipment on a scale appropriate to a commercial electricity station. This ran from 1974 until it too closed in 1994 following the UK government decision to cease the fast reactor programme. In addition, the site was used to reprocess and create new nuclear fuels. This activity stopped in 2004. To support these programmes a significant number of facilities (over 180) have been developed on the site. The focus of activity on the site is now on decommissioning these reactors and their ancillary nuclear facilities.
- 1.2 In October 2000 UKAEA published the Dounreay Site Restoration Plan (DSRP) which provided an overview of the entire restoration process. The aim of the DSRP was to restore the environment of the site safely and securely, environmentally responsibly, provided value for money and would be acceptable to the public. The responsibility for the restoration of the site transferred from UKAEA in 2005 with the establishment of the Nuclear Decommissioning Authority (NDA). The original restoration principles remain but importantly the NDA is also seeking to gain value from its estate to reinvest in decommissioning activities and therefore there is a desire to restore sites to a point where they can be re-used where economically achievable. The site, and its restoration, is now managed by Dounreay Site Restoration Limited (DSRL) on behalf of the NDA.
- 1.3 DSRL has reworked the DSRP into the Environmental Restoration Programme Plan (ERPP). To secure on a phased basis the necessary grants of planning permission, the decommissioning and restoration plan has been aligned into three development phases. The first, Phase 1, was for various activities relating to waste treatment and management of the nuclear fuel liabilities, decommissioning of reactors and fuel cycle area buildings, as well as the hydraulic isolation of the shaft and construction of the raised platform required for waste retrieval. Phase 2, which covered the period 2012 - 2018, included details of the waste retrieval and treatment facility for the shaft and silo, demolition of laboratories and buildings within the fuel cycle area and modifications to an existing interim low level waste (LLW) store. Phase 3, the subject of this application, relates to the final phase covering the period 2018 to the 'interim end state.'
- 1.4 The interim end state is stated as being the point at which decommissioning is complete i.e. when all remaining nuclear fuel has been removed, redundant buildings cleaned out and the radioactive waste made safe for long term storage or disposal. The target date when the interim end state is achieved is called the interim end point. This is December 2029.
- 1.5 After the interim end state is achieved, no further remediation activities will be required. The site will continue to be managed, maintained, and monitored until the final end point is reached and the site is closed. The final end state, when the site can be released for all uses, may be able to be achieved on significant parts of the

site at the interim end point but a much reduced portion of the site will continue to be used for storage of higher activity waste (HAW) and likely to be subject to an extended period of institutional control.

- 1.6 The site is regulated by SEPA, under the Radioactive Substances Act 1993 and the Pollution Prevention and Control (Scotland) Regulations 2000, and the Office for Nuclear Regulation (ONR), under the Nuclear Installations Act 1965 and Nuclear Reactors (Environmental Impact Assessment for Decommissioning) Regulations 1999 that apply here. These two bodies will continue to regulate the site until the site reaches the final end point and the site can be de-licensed.

## **2. PROPOSED DEVELOPMENT**

- 2.1 The application relates to the final decommission stage for Dounreay; the period 2018 - Interim End State (Phase 3). Development in Phase 3 comprises of the dismantling of 3 nuclear reactors, construction of a transit flask facility, shaft and silo waste retrieval facilities, a low level waste pits retrieval temporary building and a facility to repackage waste. It also includes the demolition of all redundant buildings, land remediation and landscaping.

### **Reactor dismantling/FCA/demolition**

- 2.2 A considerable amount of work has been undertaken already to decommission the three reactors on site with some of the most significant hazards, mainly fuels and coolants, already removed. However some fuels and coolants still remain. This Phase of work will involve the removal of these, the dismantling and disposal of the reactors and finally, the demolition of the buildings themselves.
- 2.3 The Fuel Cycle Area (FCA) is the area on the site that was historically used for the manufacture of fuel elements, examination of irradiated fuel, reprocessing of fuels and the holding/treatment of waste arising. There are a significant number of buildings and plant, including pipework, within the area. The proposal is to decontaminate plant before dismantling it, clear out buildings before then demolishing these. Some of the buildings remain in use to support the on-going decommissioning work, including some of the most important site waste management facilities.

### **LLW Pits Retrieval Facility**

- 2.4 Between 1959 and 2005 low level waste at Dounreay was authorised to be disposed of within an area of the site known as the LLW Pits Complex. This is located to the east of the DFR some 30-100m from the cliff edge. There are 6 separate unlined LLW pits lying on bedrock to a depth of 7m. In addition, there are three smaller pits containing hazardous waste. The pits contain mainly loose-tipped waste, waste in drums and large individual items.
- 2.5 Given the location so close to the shoreline, the proposal is now to retrieve this waste, re-characterise it, repackage it and then compact it. The waste would then be placed into half height ISO containers, grouted and transferred to the new LLW Facility located to the east of the licenced site.

- 2.6 Achieving this involves the construction of a mobile waste retrieval building. This will be a portal frame building covered in profiled metal sheeting. It will have a footprint of 624sqm (length 39m and width 16m) and measure 15m in height. The building will be movable using a system of hydraulic jacks. The building will provide protection for the duration of excavation activity that will involve the use of excavation plant and machinery. It is anticipated to be in use from 2020 until 2025 with the pits filled with inert material by 2026 and final capping completed by 2028.

### **Shaft and Silo Waste Retrieval Facilities**

- 2.7 The shaft was an authorised waste disposal facility regularly used between 1959 until 1970 and then occasionally thereafter until 1977. The waste came from activities at both Dounreay and HMS Vulcan and also from Harwell. The silo facility was developed to replace these earlier facilities and was first commissioned in 1971. The decision to retrieve waste from the Shaft was announced by the UK Government in 1998. Since then the facility has been under care and maintenance.
- 2.8 The shaft and silo retrieval facilities project involves erecting plant and buildings to retrieve the Higher Activity Waste within them. Retrieved waste will be packaged into 500 litre drums suitable for long term storage and disposal.
- 2.9 Planning permission was granted in March 2006 for a project to hydraulically isolate the shaft to prevent water ingress from the sea. This involved drilling several hundred boreholes before filling them with grout. A semi-permanent platform was constructed at the time. The proposed shaft retrieval building will sit on this platform.
- 2.10 The shaft and silo retrieval facilities are to be designed for ease of decommissioning using modular construction techniques with the pre-fabrication of major components off-site. The footprint of the shaft retrieval building will be approximately 2400sqm and silo waste retrieval facility 600sqm. Both buildings will be approximately 16m in height. Each will have a stack. An additional control building with footprint of 450sqm and substation with floor area of 280sqm are to be constructed.
- 2.11 Headworks will be constructed above the shaft and silo to accommodate a combination of industrial grabs and robotic mechanisms for lowering into each facility to recover waste. Water levels in each facility will be lowered gradually as more waste is recovered. As the water level within the shaft is lowered, the groundwater flow towards the shaft will increase. This will be intercepted and pumped from boreholes surrounding the shaft to minimise the volume of contaminated effluent requiring treatment and disposal. It is anticipated that this water will be reused to reduce treated water requirements.
- 2.12 Retrieved waste will be screened and characterised with solid bulk items cut up and smaller items shredded. Sludge and water will be collected in tanks. Once sorted, the solids will be compacted and liquids thickened and solidified. Waste will be placed in 500 litre drums and filled with grout to encapsulate the waste ready for long term storage and disposal.

- 2.13 The volume of waste anticipated from the Shaft is 740m<sup>3</sup> (646m<sup>3</sup> solids and 94m<sup>3</sup> of sludge particulate). The volume of waste anticipated from the Silo is 480m<sup>3</sup> (446m<sup>3</sup> solids and 34m<sup>3</sup> of sludge particulate).

#### **PFR Flask Loading Facility**

- 2.14 This project is required to assist with the removal of a selection of the remaining nuclear fuels and materials (exotics) from the site and aid its transfer to Sellafield for its long term management.
- 2.15 The scheme involves the construction of a large steel portal frame building adjacent to the PFR building. The building will have a footprint of approximately 2,175sqm with height of approximately 29m. It will house a gantry crane of a size suitable for handling the required transport flasks. The process will involve repackaging the wastes in the PFR fuel cave before moving them to the new facility, placing them into the transport flasks ready for onward transport to Sellafield.

#### **Waste Repackaging Facility**

- 2.16 Dounreay has around five thousand 200 litre drums of Contact Handled Intermediate Level Waste (CHILW) on site. Future operations are likely to create an additional 1100-1200 drums. It was initially intended that the treatment and packaging of this waste would utilise existing on-site facilities used for packaging LLW. However, doing so would have resulted in the site interim end state being extended by a further 8 years. As a result a decision was taken to build a new facility.
- 2.17 The proposal is to construct a portal framed structure surrounded by a modular concrete wall to provide some shielding. The building footprint, including walled area, will be around 875sqm. The building itself will have a footprint of approximately 600sqm with height of 8m. The building will be located adjacent to the existing CHILW store.

#### **Demolition/Land Remediation**

- 2.18 Most of the buildings on site will be demolished to achieve the Interim End State. Once facilities have been decommissioned, plant removed and disposed of and the buildings demolished the land will be remediated. Not all buildings will be removed however, with the Higher Activity Waste stores remaining in place until a long term solution for this waste is determined. In addition, it is currently proposed to retain the administration block which is a very modern office block in good condition.
- 2.19 For the purpose of identification and to facilitate a methodical approach to demolition the site is subdivided into 11 zones. The idea is that this could allow for working in sequential phases to reduce the requirement for mobilisation and the risk of recontamination. However, it is likely that zones, or parts of zones, will be progressed separately dependent upon priorities.

- 2.20 The submission states that it is not intended that all building elements will be removed and that some concrete plinths, floor slabs and below ground structures may be left in place. In addition, the proposal includes potential to backfill any voids with suitable material.
- 2.22 Much is known about the extent of existing ground contamination on the site. Each zone is to be fully characterised to allow a detailed safety case, risk assessment and remediation strategy (if required). The intention is that remediation will be undertaken on areas of ground shown to exceed the agreed clean up criteria during characterisation. The aim is to ensure that any contamination left in the ground at the Interim End Point must meet the *no danger* threshold by the Final End Point in 2333. At this point the site should be able to have unrestricted use.

### **Landscaping**

- 2.23 The proposal includes an outline landscape strategy for the Interim End State. The strategy seeks to provide flexibility for future land use taking into account the known and likely ground remediation areas.
- 2.24 The proposed design seeks to conserve and enhance the landscape, cultural and ecological value of the site ensuring it has minimal maintenance requirements and does not preclude future re-use of the site.
- 2.25 Pre Application Consultation: Proposal of Application Notice submitted 19.05.2017 (17/02428/PAN)
- 2.26 Supporting Information: Environmental Statement
- 2.27 Variations: The masterplan has been revised.

## **3. SITE DESCRIPTION**

- 3.1 The application site is the Dounreay nuclear facility situated on the north Caithness coastline to the west of Thurso. The application site takes in an area of land around 140 acres. Surrounding uses are farming to the south, on land also owned by the NDA, and the MOD owned HMS Vulcan facility on land immediately to the west. The closest residential properties to the site are at Buldoo some 600m directly to the south. Access to the site is from the A836 just west of Buldoo.
- 3.2 There is considerable history associated with Dounreay. The most recent relevant history is outlined below.

## **4. PLANNING HISTORY**

- |     |                  |   |                             |
|-----|------------------|---|-----------------------------|
| 4.1 | 13 April 1999    | Erection of nitrogen generation and storage facility adjacent to PFR (99/00013/FULCA) | Planning permission granted |
| 4.2 | 16 February 2001 | Erection of caesium removal plant adjacent to DFR (99/00041/FULCA)                    | Planning permission granted |

4.3	13 April 2003	Erection of nuclear waste transfer building (03/00038/FULCA)	Planning permission granted
4.4	21 May 2003	Extension to building D1115 comprising steel structural frame with brick and metal cladding, for use as storage vault for radioactive contaminated components and partial demolition of D111 (03/00174/FULCA)	Planning permission granted
4.5	17 June 2003	Erection of two portal steel framed buildings over low level waste pits 3 and 4 for a period of ten years for use as a facility for the handling and storage of low level nuclear waste (03/00015/FULCA).	Planning permission granted
4.6	08 July 2003	Erection of steel portal framed building for processing of aqueous liquids generated by de-commissioning activities and for use as a process plant approved (03/00205/FULCA)	Planning permission granted
4.7	03 October 2003	Application for continued consent to store low level waste in existing building for a further 10 years (03/00264/FULCA)	Planning permission granted
4.8	28 May 2004	Erection of a conditioned waste store for intermediate level radio-active waste with transfer facility and associates office accommodation (03/00515/OUTCA)	Planning permission granted
4.9	18 February 2005	Demolition of building D1110 and erection of building to be used as facility for the removal and treatment of breeder fuel from the Dounreay Fast Reactor (04/00363/FULCA)	Planning permission granted
4.10	07 March 2006	Formation of hardstanding area on Dounreay foreshore plus drilling of up to 400 boreholes and injecting of grout to rocks and effluent discharge tunnel all in vicinity of the Dounreay shaft (05/00479/FULCA)	Planning permission granted
4.11	21 March 2006	Replacement Ventilation System for fuel cycle area comprising 35 metre high stack installation of ducting along roof of fuel cycle area corridor, housing for discharge monitoring system and fan/filter, support gantry and all ancillary engineering and building operations (06/00004/FULCA)	Planning permission granted

4.12	29 January 2007	Phase 1 (to Year 2010) development at Dounreay comprises an intermediate level waste cementation plant and store, export facility for contaminated material and temporary modular accommodation (06/00420/OUTCA)	Outline planning permission granted
4.13	14 April 2009	Phase 1 (to Year 2010) development at Dounreay comprises an intermediate level waste cementation plant and store including associated sub station, transfer line and lift station (09/00046/REMCA)	Reserved Matters Approved
4.14	27 April 2009	Construction of low level waste facilities, comprising of up to 6 shallow sub surface vaults, grouting plant and administration building with associated infrastructure (06/00373/FULCA)	Planning permission granted
4.15	20 May 2013	The development of Shaft and Silo Retrieval Facilities, change of use from an existing waste facility to a store for conditioned ILW and the demolition of redundant buildings (12/04017/PIP) (Phase 2)	Planning permission in principle granted
4.16	25 March 2015	Erection of extension to existing building to provide storage for cemented drums and inspection of drums (15/00092/FUL)	Planning permission granted
4.17	16 May 2017	Proposed extension to Dounreay Cementation Plant (17/01085/FUL)	Planning permission granted
4.18	21 December 2017	Continuation of operation of two stores pending transfer of material to the LLW Disposal Facility situated adjacent to the Site (17/05342/FUL)	Planning permission granted

## 5. PUBLIC PARTICIPATION

5.1 Advertised: John O'Groat Journal and Edinburgh Gazette as Environmental Impact Assessment development

Date Advertised: 10.11.2017

Representation deadline: 10.12.2017

Timeous representations: 0

Late representations: 0



## 6. CONSULTATIONS

- 6.1 **Caithness West Community Council:** No response
- 6.2 **Transport Planning Team:** No objection subject to implementation of the Travel Plan Framework set out within Section 5 of the Transport Assessment Addendum.
- 6.3 **Flood Team:** No objection.
- 6.4 **Environmental Health:** No response.
- 6.5 **Contaminated Land Team** advises that the proposal will not materially change the risk of potential contamination. It also advises that, given that the site is currently licensed and regulated by the Office for Nuclear Regulation (OnR) and SEPA, no contaminated land condition is required.
- 6.6 **Historic Environment Team:** No response.
- 6.7 **Historic Environment Scotland** notes that the outline landscape strategy includes provision for a proposed heritage walkway or cycleway. While it welcomes these proposals to provide greater and safer access to the heritage assets in the vicinity of the sites, the details of how the proposals will be implemented are not clear. It advises that any proposals to create paths in the vicinity of Cnoc-na-h'Uiseig chambered cairn and Dounreay Castle are kept out of the legally protected areas of these monuments.
- 6.8 **Scottish Natural Heritage** advises that the proposal is unlikely to have a significant effect on any qualifying feature of the North Caithness Cliffs and Caithness Lochs SPA due to the distance of the Dounreay site from both SPAs, limited use of the site by birds connected to these SPAs and the existing works in the area.
- In relation to bats, SNH recommend that affected buildings should be surveyed for the presence of bats prior to and no more than 18 months before demolitions. It goes on to advise that if roosting bats could be affected a Species Protection Plan would need to be prepared and a license applied for.
- In relation to otter, SNH agree with the recommendation for further pre-work surveys. SNH asks that a Species Protection Plan is prepared, to include mitigation measures, to prevent damage/destruction of holts and ensure that otters using these are not disturbed.
- 6.9 **SEPA** has no objection. SEPA advises that, given the extent of regulatory control over many aspects of the development, it would not request the imposition of planning conditions. SEPA has qualified in its response that, with regard to the proposed new facilities, it has not been presented with any demonstration of Best Practical Means to adequately assess whether the proposals, as presented on the application, will meet the requirements of the Radioactive Substances Act (RSA93).
- 6.10 **Office for Nuclear Regulation:** No response.
- 6.11 **Transport Scotland:** No objection.
- 6.12 **Scottish Water:** No response.

## **7. DEVELOPMENT PLAN POLICY**

The following policies are relevant to the assessment of the application:

### **7.1 Highland Wide Local Development Plan 2012**

- 24 - Dounreay
- 28 - Sustainable Design
- 29 - Design Quality and Place-making
- 30 - Physical Constraints
- 31 - Developer Contributions
- 41 - Business and Industrial Land
- 42 - Previously Used Land
- 55 - Peat and Soils
- 56 - Travel
- 57 - Natural, Built and Cultural Heritage
- 58 - Protected Species
- 59 - Other important Species
- 60 - Other Important Habitats
- 61 - Landscape
- 63 - Water Environment
- 64 - Flood Risk
- 66 - Surface Water Drainage
- 70 - Waste Management Facilities
- 72 - Pollution
- 73 - Air Quality
- 77 - Public Access

### **7.2 Caithness Local Plan 2002 (as continued in force 2012)**

No specific policies apply.

### **7.3 Caithness and Sutherland Draft Local Development Plan Modified Proposed Plan (2016)**

No specific policies apply.

## **8. OTHER MATERIAL CONSIDERATIONS**

### **8.1 Highland Council Supplementary Planning Policy Guidance**

- Dounreay Planning Framework 2 (DPF2) (April 2015)
- Construction Environmental Management Process for Large Scale Projects (August 2010)
- Developer Contributions (March 2013)
- Flood Risk and Drainage Impact Assessment (Jan 2013)
- Highland Historic Environment Strategy (Jan 2013)
- Highland's Statutorily Protected Species (March 2013)
- Managing Waste in New Developments (March 2013)
- Physical Constraints (March 2013)
- Standards for Archaeological Work (March 2012)
- Sustainable Design Guide (Jan 2013)

## 8.2 **Scottish Government Planning Policy and Guidance**

SPP (2014)

## 9. **PLANNING APPRAISAL**

9.1 Section 25 of the Town and Country Planning (Scotland) Act 1997 requires planning applications to be determined in accordance with the development plan unless material considerations indicate otherwise.

### **Determining Issues**

9.2 This means that the application requires to be assessed against all policies of the Development Plan relevant to the application, all national and local policy guidance and all other material considerations relevant to the application.

### **Planning Considerations**

9.3 The key considerations in this case are:

- a) compliance with the development plan and other planning policy;
- b) building design and visual impact;
- c) impact on archaeology/cultural heritage;
- d) impact on ecology;
- e) transport impacts;
- f) impact on water environment/contaminated land and end state;
- g) socio-economic impact
- h) any other material considerations.

### **Development plan/other planning policy**

9.4 Policy 24 of the Highland wide Local Development Plan supports the timely, safe and environmentally acceptable decommissioning, restoration and after-use of the Dounreay site. The policy sets the framework for preparation of updated supplementary guidance; the Dounreay Planning Framework (DPF2) subsequently being adopted in 2015. The key elements of the Phase 3 decommissioning proposal are included within the Site Restoration Programme outlined within the supplementary guidance. In principle therefore the proposals are supported.

9.5 The shaft and silo retrieval project was identified as a Phase 2 project and actually granted permission in 2013. Unfortunately this project stalled. There has been no significant change to policy to indicate that this should not however be renewed. While the retrieval of LLW subject to this application is within Phase 3 it should be noted that the permission granted for the new low level waste facility to the east of the site made specific provision for the material originating from the old LLW pits, to be repackaged and relocated to the new facility.

- 9.6 Subject to the proposals having no significant environmental impact or adverse effect on natural, built or cultural heritage and that the amount of land suitable and available for re-use as an industrial/business site is optimised at the Interim End State then the proposal would comply with the development plan.

### **Building design/visual impact**

- 9.7 While this is an application for detailed planning permission, the detailed design of some of the new buildings proposed is yet to be fully drawn up. However, there is sufficient detail contained within the submission on the conceptual designs to enable an assessment of the proposals. The final design details can ultimately be controlled by condition.
- 9.8 The proposed flask loading facility is a considerable scale of building; including height. However, it will be located adjacent to the existing PFR building and will be seen in that context albeit the exact location is yet to be determined. It is unlikely to remain on site after the PFR building is demolished. Accordingly it is not considered that its visual impact will be significant.
- 9.9 The low level waste retrieval facility will be fairly low level and situated far into the site, near the foreshore, away from most receptors. It will be seen in the context of the DFR complex and other industrial buildings. The shaft and silo retrieval project will create buildings of scale within a relatively open part of the site. When viewed from a distance at higher altitude, which is when most likely to be seen, it is situated within a larger industrial context and needs to be considered on that basis. The proposed annex to the CHILW will be seen in the context of the FCA which is densely packed with buildings and other facilities and surrounded by additional security fencing. The building will take up a very small area within the overall complex.
- 9.10 In any event the effect of these new builds will be relatively short term. The wider programme of decommissioning and demolition is when the most significant visual effects will be experienced. In a relatively short space of time some significant structures will disappear from the Caithness landscape. This, while symbolic of the end of an era, should be considered as a positive effect on the environment.
- 9.11 The outline landscaping proposals seek to create green space that blends with the surrounding environment. Proposals include amenity grassed areas, areas where wildflowers will be planted, a wetland area and planting of trees to screen the buildings that will remain on site. This is considered an appropriate response to ensuring that there is an amenity value to the site that may help attract future users.

### **Cultural Heritage**

- 9.12 Consideration of the historic environment was 'scoped' out of the Environmental Impact Assessment since no development associated with this Phase of decommissioning were considered likely to impact upon any scheduled monuments or features of archaeological interest given the existing context. A Dounreay Heritage Strategy was published in 2010 and it acknowledges that all facilities,

including the Dounreay Fast Reactor (DFR) sphere, are planned to be demolished. Dounreay's heritage will be preserved by archiving records, photos, films and drawings etc. and stored at the National Nuclear Archive in Wick.

- 9.13 The proposed landscape plan does however include reference to a heritage walkway and cycleway, linking Cnoc-na-h'Uiseig chambered cairn to the east of the site with Dounreay Castle on the coast. Both are scheduled monuments. Historic Environment Scotland (HES), while welcoming the provision of improved access to heritage assets advises that these paths should be kept out of the legally protected areas of these monuments. It is likely that DSRL will need to discuss the detail of this initiative with HES, as asset owner, before finalising its plans. As such HES should maintain sufficient control over this matter and therefore it is not considered necessary for a condition to be added to any planning permission that might be granted.

### **Ecology**

- 9.14 The site is not subject to any statutory or non-statutory nature designation. There are however a number located nearby including; the North Caithness Cliffs SPA (300m to the west), the Caithness and Sutherland Peatlands SPA/Ramsar (4.5km south-west) and the Caithness Lochs SPA/Ramsar (6.2km to the south-east). In addition there are eleven SSSI's within a range of 2km to 20km.
- 9.15 The key habitat in Dounreay is amenity grassland with semi-improved grassland within Zone 1B (bee meadow area). An area of spruce plantation is located on the south-east corner of the site. There are a number of plant species of conservation importance within or close to the Dounreay site, including Scottish primrose and Reay eyebrights. A watercourse, Dounreay Burn, runs through the site. While there are known to be 14 species of breeding bird within the site some of these species are controlled under licence from SNH. With regard to mammals, there is a colony of pipistrelle bats present on the site. At the time of the survey (2015/16) there were no roosting bats found in any of the buildings. Previous survey work in connection with the shaft and silo project identified evidence of otter activity along the Dounreay Burn. More recent survey identified that the site contained habitat suitable for otter but unlikely to be suitable for breeding.
- 9.16 Scottish Natural Heritage has advised that the proposals are unlikely to have a significant effect on any qualifying feature of the North Caithness Cliffs and Caithness Lochs SPAs due to the distance of the Dounreay site from both SPAs, limited use of the site by birds connected to these SPAs and the existing works in the area. The applicant considers that the impact on habitat and species will be limited, predominantly temporary in nature, and not significant. This is not disputed.
- 9.17 Since wildlife is likely to continue to be controlled until the Interim End Point, opportunities for species to colonise the area will be limited in the short term. However, the proposed landscaping strategy does contain proposals for habitat creation and potential enhancement. Having said that, once the site licence, or part thereof, is revoked it is expected that the site will continue to be used for business and industry. The level of enhancement therefore need not be great.

- 9.18 SNH has no objection to the proposal subject to pre-commencement surveys on buildings likely to support bats being undertaken prior to their demolition and preparation of a Species Protection Plan for otter.

### **Transport impacts**

- 9.19 A Transport Assessment has been undertaken and submitted in support of this application. This shows that the Phase 3 works will result in an increase in activity on the road network but of minor significance. Queuing would increase for right turning vehicles on the A836 during the AM peak hour. The applicant is keen to point out however that this would be temporary and would diminish as the number of permanent staff declines from 2024 onwards. Having said that, mitigation in the form of a traffic management plan for Phase 3 contractors and suppliers is suggested i.e. to ensure that contractor staff, HGV's and supply vehicles avoid existing peak times. The addendum to the Transport Assessment identifies that this plan essentially exists already under the name *Safe Use of Site Roads*; a policy that contractors are obliged to follow. It is suggested that for Phase 3 however that the AM peak hours to be avoided be extended from 07:45 - 08:00 to 07:30 - 08:00.
- 9.20 In addition, the addendum to the Transport Assessment identifies a Travel Plan Framework. While recognising that a travel plan for this application is unlikely to deliver long term change in modal shift for contractors, given their transient nature, the Travel Plan Framework identifies the appointment of a Travel Plan Coordinator to make contractors aware of existing sustainable transport opportunities, in particular the existing bus services and car sharing. Subject to the implementation of the measures identified Transport Planning has no objection to the application.

### **Impact on the water environment/ground contamination/end state**

- 9.21 The site decommissioning and remediation proposals seek to achieve levels of residual radiological and chemical contamination that protects the environment and allows the site to be safe for future use.
- 9.22 Beyond reaching the Interim End State there will be a period, when institutional controls are still in place, that no further remediation or restoration of the site is anticipated although attenuation and radioactive decay will continue to reduce the concentration of any residual contaminants. The Phase 3 works are therefore extremely important to achieve the desired outcome of a site that would be capable of reuse as soon as it becomes available.
- 9.23 Splitting the site into 11 zones will assist with the identification and characterisation of contaminants but actual remediation is unlikely to be carried out sequentially. Zones, or parts of zones, will be progressed separately dependent upon priorities. Current thinking is that the final remediation strategy will be determined, with discussion with Regulators, by agreeing an approach to particular themes or principles that are likely to appear time and again on the site. Once demolitions have been undertaken in each zone then this agreed approach will be applied to each individual zone, or part thereof.

- 9.24 The hydrology of the site is determined by the underlying rock structure with ground water flow direction to the north where it discharges to the seabed, foreshore or the foot of the cliffs. There are around 200 ground water monitoring boreholes on the site and groundwater monitoring takes place regularly. This will continue during remediation.
- 9.25 The site has experienced both radiological and non-radiological ground contamination. Non-radiological contamination has generally arisen from the storage and use of hydrocarbon fuel oils and to a lesser extent solvents and metals. There is no indication from historical records of any major incidents resulting in a significant release of chemical contamination to the ground. With regard to radiological contamination, the main areas of potential concern that are likely to require remediation are the areas around the DFR/LLW pits, the Fuel Cycle Area and the Silo - Zones E, F, G and J. Within these areas contamination will need to be excavated and disposed of and replaced with a clean cover of rock and soil (capped) to protect future end users from any residual radioactivity.
- 9.26 The level to which the site will be remediated and contamination addressed will be subject to scrutiny of SEPA and ONR. The Council is not a regulator with regard to contaminated land on this site but it does have an interest in ensuring that the site will be available for its intended use without harm to human health. It is expected that the Council will continue to be involved in discussion on the final remediation proposals since, if nothing else, this will influence the final landscaping strategy for the site.
- 9.27 DPF 2 expects the amount of land available for reuse at the Interim End State to be optimised. In preparing that document, and in subsequent discussions with the NDA and site operator, officers have pushed for any buildings/areas of institutional control that need to remain after the Interim End State to be grouped towards the eastern end of the site. This principle will continue to influence discussion on the final remediation strategy and landscape plan.

### **Socio-economic impacts**

- 9.28 The applicant estimates that of the current annual budget from the NDA around £135m is spent on the procurement of products and services. It is estimated that approximately £90m goes to the Highland economy.
- 9.29 It is estimated that nearly 300 jobs will be created at the peak of the Phase 3 works. However, as decommissioning is overtaken by demolition and remediation the number of DSRL staff on site will decrease, with around 400 staff requiring new employment by the Interim End Point. The impact from the Interim End Point will not only result in the loss of the £90m contract spend locally but a reduction of £10.8m annual spend within the Dounreay travel to work area.
- 9.30 The Caithness and North Sutherland Regeneration Partnership, created in late 2007, is working to help the local supply chain to access new and emerging opportunities in the renewable energy industry and promote investment in infrastructure to assist in retaining a skilled workforce in the area. Other initiatives are promoted by the NDA and DSRL to develop apprenticeships, retrain staff and promote STEM within schools and colleges in the area.

## **Other material considerations**

9.31 There are no other material considerations.

## **Matters to be secured by Section 75 Agreement**

9.32 None.

## **10. CONCLUSION**

10.1 This is by far the most significant stage in the decommissioning of the Dounreay site. The new build proposals are unlikely to have any significant impact on visual amenity and will assist in the timely decommissioning of existing facilities. By the Interim End Point, 2029, the majority of buildings will have been removed from the site and the site remediated. While parts of the site will remain under institutional control for many years to come, the proposal should offer the opportunity for the early reuse of the site should such opportunities arise. Subject to agreeing the final remediation/end state of the site the proposals are acceptable.

10.2 The closure of Dounreay has long been anticipated and while the economic impact of this will be severe, work to reduce the impact is ongoing. This collective effort aims to ensure that the workforce is in a position to benefit from emerging opportunities within the renewables and other sectors where existing skills can be transferrable, that young people can benefit from existing on-site opportunities while available and that infrastructure within the area is improved in order for Caithness and North Sutherland to compete in new markets.

10.3 All relevant matters have been taken into account when appraising this application. It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

## **11. IMPLICATIONS**

11.1 Resource: Not applicable

11.2 Legal: Not applicable

11.3 Community (Equality, Poverty and Rural): Not applicable

11.4 Climate Change/Carbon Clever: Not applicable

11.5 Risk: Not applicable

11.6 Gaelic: Not applicable

## **12. RECOMMENDATION**

**Action required before decision issued** N

**Subject to the above**, it is recommended that planning permission be **GRANTED**, subject to the following:



## Conditions and Reasons

1. No development shall commence on the LLW Pits Retrieval Facility and Waste Repackaging Facility until details of the buildings, including all dimensions and external appearance, have been submitted to, and agreed in writing by, the Planning Authority. Development shall proceed in accordance with the agreed details.

**Reason:** In order to retain and/or protect important elements of the existing character and amenity of the site since these proposals are at concept stage only.

2. No development shall commence on the Flask Facility, Waste Repackaging Facility, LLW Pits Retrieval Facility and Shaft and Silo Waste Retrieval Facilities until a Construction Environmental Management Plan(s) (CEMP(s)) providing construction methodology and programme for these developments has been submitted to, and agreed in writing by, the Planning Authority. Development shall proceed in accordance with the CEMP(s).

**Reason:** To protect the environment from the construction and operation of the development.

3. No development shall commence on the Flask Facility until details of the siting and design of the Facility have been submitted to, and agreed in writing by, the Planning Authority. The proposed Flask Facility shall be positioned as shown on Phase 3 Location Plan, drawing no. ERO/P04/11, dated October 2017, subject to a micro-siting allowance of 60m from the Prototype Fast Reactor (PFR) facility. The development shall be implemented in accordance with the agreed details.

**Reason:** In order to retain and/or protect important elements of the existing character and amenity of the site since these proposals are at concept stage only.

4. No development shall commence until a finalised Travel Plan, relating to the Phase 3 works, in line with the Travel Plan Framework set out within Section 5 of the Transport Assessment Addendum, has been submitted to, and agreed in writing by, the Planning Authority. The agreed plan shall be implemented.

**Reason:** To encourage use of sustainable travel modes in the interest of reducing demand on the road network.

5. No land remediation or landscaping works shall commence until a phasing plan for the remediation and landscaping has been submitted to, and agreed in writing by, the Planning Authority. Unless otherwise agreed in writing, the proposals shall be implemented in accordance with the phasing plan.

**Reason:** To ensure that the appropriate level of remediation is achieved to enable the site to be reused at the earliest opportunity.

6. No landscape works shall commence until a Landscape Plan has been submitted to, and agreed in writing by, the Planning Authority. The Landscape Plan shall include:
  - i. existing landscaping features and vegetation to be retained and, in the case of damage, restored;

- ii. new landscaping features including plants, trees, hedges and grassed areas with their locations;
- iii. soil type and preparation specifications;
- iv. planting schedules and specifications;
- v. detailed drainage scheme (SuDS compliant);
- vi. existing and proposed services such as cables and pipelines;
- vii. means of fence/gate or other enclosure;
- viii. the final earthworks profile, including details of any areas of integral protective cover and the final landscape layer;
- ix. proposed final grading and mounding of land areas including the: proposed fill materials, final levels and contours to be formed, showing the relationship of proposed mounding to existing vegetation and surrounding landform; and
- x. a programme for the commencement and completion of the landscaping works.

The agreed plan shall be implemented.

**Reason:** In order to ensure that a high standard of landscaping is achieved, appropriate to the location of the site and compatible with the remediation required.

7. Not less than three (3) months prior to the completion of the development, details of proposed land management and aftercare of the site, beyond the Interim End Point, shall be submitted to, and agreed in writing by, the Planning Authority. The agreed scheme shall be implemented.

**Reason:** In order to ensure that the land is appropriately managed in the longer term.

8. No demolition of any building shall proceed until a pre-commencement survey has been undertaken to assess the presence or otherwise of bats. Where activity is identified, no work shall commence until an appropriate Species Protection Plan has been prepared and licence applied for.

**Reason:** In order to protect bat species and habitat.

## **REASON FOR DECISION**

It is considered that the proposal accords with the principles and policies contained within the Development Plan and is acceptable in terms of all other applicable material considerations.

## **TIME LIMIT FOR THE IMPLEMENTATION OF THIS PLANNING PERMISSION**

In accordance with Section 58 of the Town and Country Planning (Scotland) Act 1997 (as amended), the development to which this planning permission relates must commence within THREE YEARS of the date of this decision notice. If development has not commenced within this period, then this planning permission shall lapse.

## **FOOTNOTE TO APPLICANT**

### **Initiation and Completion Notices**

The Town and Country Planning (Scotland) Act 1997 (as amended) requires all developers to submit notices to the Planning Authority prior to, and upon completion of, development. These are in addition to any other similar requirements (such as Building Warrant completion notices) and failure to comply represents a breach of planning control and may result in formal enforcement action.

1. The developer must submit a Notice of Initiation of Development in accordance with Section 27A of the Act to the Planning Authority prior to work commencing on site.
2. On completion of the development, the developer must submit a Notice of Completion in accordance with Section 27B of the Act to the Planning Authority.

Copies of the notices referred to are attached to this decision notice for your convenience.

### **Accordance with Approved Plans and Conditions**

You are advised that development must progress in accordance with the plans approved under, and any conditions attached to, this permission. You must not deviate from this permission without consent from the Planning Authority (irrespective of any changes that may separately be requested at the Building Warrant stage or by any other Statutory Authority). Any pre-conditions (those requiring certain works, submissions etc. prior to commencement of development) must be fulfilled prior to work starting on site. Failure to adhere to this permission and meet the requirements of all conditions may invalidate your permission or result in formal enforcement action

### **Flood Risk**

It is important to note that the granting of planning permission does not imply there is an unconditional absence of flood risk relating to (or emanating from) the application site. As per Scottish Planning Policy (paragraph 259), planning permission does not remove the liability position of developers or owners in relation to flood risk.

## **Scottish Water**

You are advised that a supply and connection to Scottish Water infrastructure is dependent on sufficient spare capacity at the time of the application for connection to Scottish Water. The granting of planning permission does not guarantee a connection. Any enquiries with regards to sewerage connection and/or water supply should be directed to Scottish Water on 0845 601 8855.

## **Septic Tanks and Soakaways**

Where a private foul drainage solution is proposed, you will require separate consent from the Scottish Environment Protection Agency (SEPA). Planning permission does not guarantee that approval will be given by SEPA and as such you are advised to contact them direct to discuss the matter (01349 862021).

## **Local Roads Authority Consent**

In addition to planning permission, you may require one or more separate consents (such as road construction consent, dropped kerb consent, a road openings permit, occupation of the road permit etc.) from the Area Roads Team prior to work commencing. These consents may require additional work and/or introduce additional specifications and you are therefore advised to contact your local Area Roads office for further guidance at the earliest opportunity.

Failure to comply with access, parking and drainage infrastructure requirements may endanger road users, affect the safety and free-flow of traffic and is likely to result in enforcement action being taken against you under both the Town and Country Planning (Scotland) Act 1997 and the Roads (Scotland) Act 1984.

Further information on the Council's roads standards can be found at: <http://www.highland.gov.uk/yourenvironment/roadsandtransport>

Application forms and guidance notes for access-related consents can be downloaded from:

[http://www.highland.gov.uk/info/20005/roads\\_and\\_pavements/101/permits\\_for\\_working\\_on\\_public\\_roads/2](http://www.highland.gov.uk/info/20005/roads_and_pavements/101/permits_for_working_on_public_roads/2)

## **Mud and Debris on Road**

Please note that it is an offence under Section 95 of the Roads (Scotland) Act 1984 to allow mud or any other material to be deposited, and thereafter remain, on a public road from any vehicle or development site. You must, therefore, put in place a strategy for dealing with any material deposited on the public road network and maintain this until development is complete.

**Construction Hours and Noise-Generating Activities:** You are advised that construction work associated with the approved development (incl. the loading/unloading of delivery vehicles, plant or other machinery), for which noise is audible at the boundary of the application site, should not normally take place outwith the hours of 08:00 and 19:00 Monday to Friday, 08:00 and 13:00 on Saturdays or at any time on a Sunday or Bank Holiday in Scotland, as prescribed in Schedule 1 of the Banking and Financial Dealings Act 1971 (as amended).

Work falling outwith these hours which gives rise to amenity concerns, or noise at any time which exceeds acceptable levels, may result in the service of a notice under Section 60 of the Control of Pollution Act 1974 (as amended). Breaching a Section 60 notice constitutes an offence and is likely to result in court action.

If you wish formal consent to work at specific times or on specific days, you may apply to the Council's Environmental Health Officer under Section 61 of the 1974 Act. Any such application should be submitted after you have obtained your Building Warrant, if required, and will be considered on its merits. Any decision taken will reflect the nature of the development, the site's location and the proximity of noise sensitive premises. Please contact [env.health@highland.gov.uk](mailto:env.health@highland.gov.uk) for more information.

### **Contaminated Land**

There is potential for radiological and non-radiological contamination at this site due to its former use as a nuclear power facility. As the decommissioning process is overseen by the NDA and the site licensed by the ONR working with SEPA, a contaminated land site investigation and remediation strategy is not required to be approved by The Highland Council. However, be advised that all sites with a former industrial/commercial use have been priorities by The Highland Council under duties conferred by Part IIA of the Environmental Protection Act 1990, and may require investigation in the future. Should you wish to discuss potential contamination issues or commission your own investigation, please contact Community Services, Contaminated land for advice.

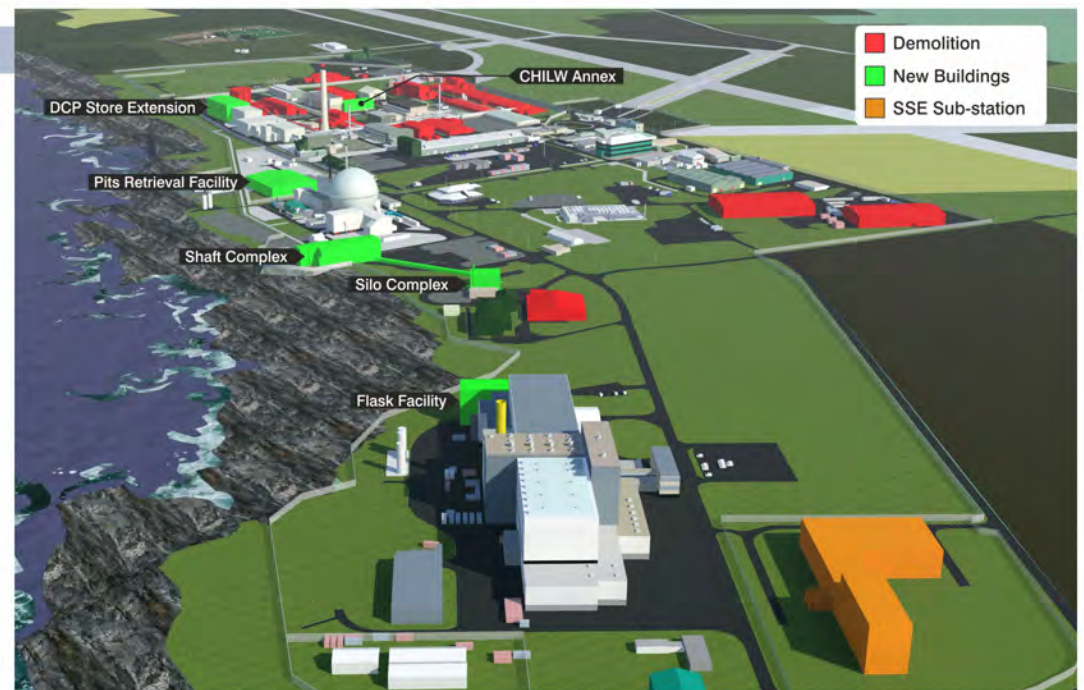
### **Protected Species – Halting of Work**

You are advised that work on site must stop immediately, and Scottish Natural Heritage must be contacted, if evidence of any protected species or nesting/breeding sites, not previously detected during the course of the application and provided for in this permission, are found on site. For the avoidance of doubt, it is an offence to deliberately or recklessly kill, injure or disturb protected species or to damage or destroy the breeding site of a protected species. These sites are protected even if the animal is not there at the time of discovery. Further information regarding protected species and developer responsibilities is available from SNH: [www.snh.gov.uk/protecting-scotlands-nature/protected-species](http://www.snh.gov.uk/protecting-scotlands-nature/protected-species)

Signature:	Dafydd Jones
Designation:	Area Planning Manager – North
Author:	David Mudie
Background Papers:	Documents referred to in report and in case file.
Relevant Plans:	Plan 1A - Phase 3 3D images Plan 1B - Interim End State Plan 2 - 00002 - Location Plan SWA_ Plan 3 - 1Z301849 - ILW Repacking Facility Concept Plan 4 - Z280810 - Flask Loading Facility Concept Plan 5 - SWA_DR_080/10001B - General Arrangement Plan Plan 6 - SWA_DR_010/10020B - Shaft Elevations Plan 7 - SWA_DR_010/10021B - Shaft Elevations Plan 8 - SWA_DR_050/10011B - Silo Elevations Plan 9 - SWA_DR_050/10012B - Silo Elevations Plan 10 - SWA_DR_070/10004A - Control Building Elevations Plan 11 - SWA_DR_050/10017B - Transfer Corridor Plan 12 - 00003 - LLW Pits Plan 13 - 1Z301847 - LLW Retrieval Building Concept Plan 14 - 1Z301848 - LLW Retrieval Building Concept Plan 15 - Z291657 - Outline Landscape Strategy

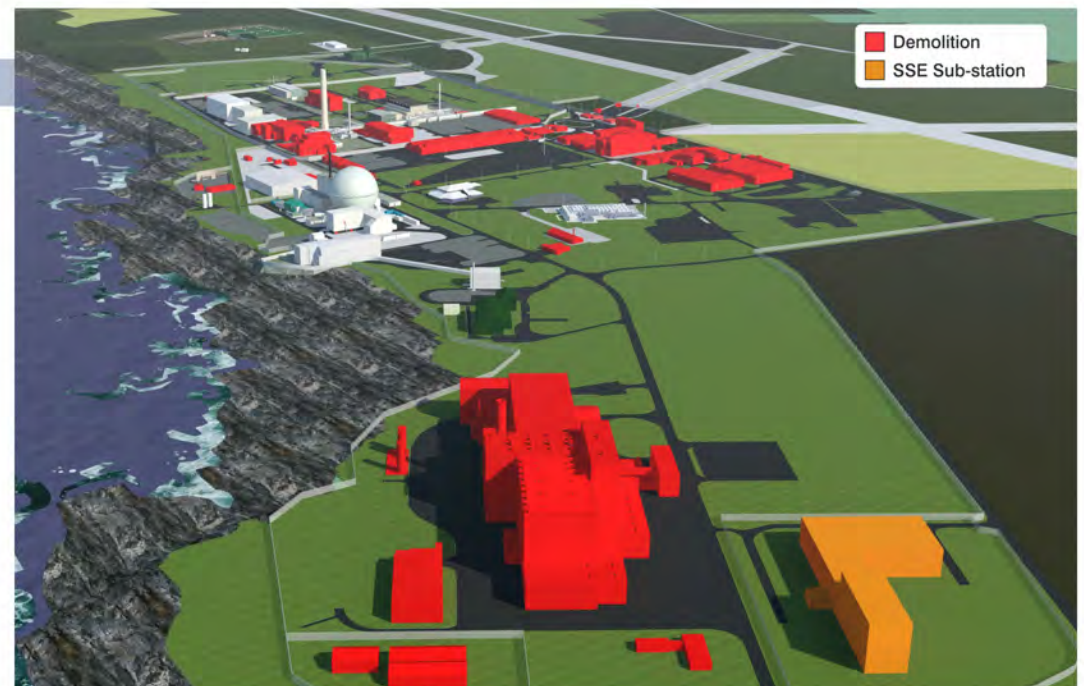
## Stage 1 is approximate 5 year period

- New builds
- Early demolitions



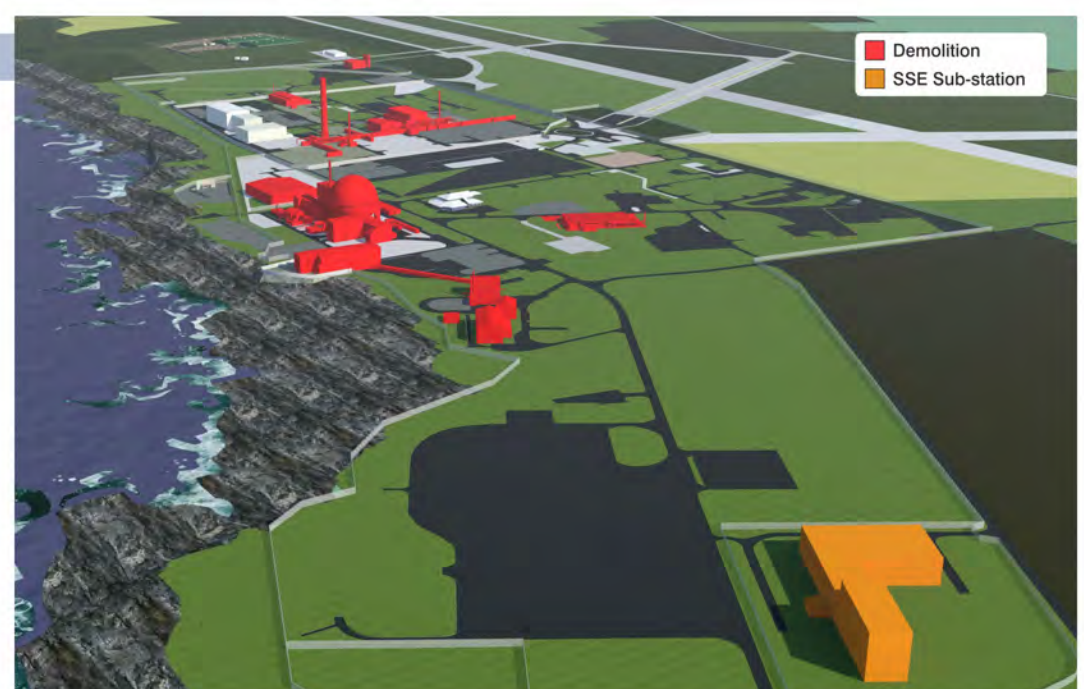
## Stage 2 is approximate 3 year period

- An intensive period of demolitions including large facilities such as the Prototype Fast Reactor (PFR) shown in the foreground



## Stage 3 is approximate 4 year period

- All remaining demolitions
- Site remediation and landscaping



It is assumed that by 2030-33 the site will have reached its Interim End State, which means:

- All decommissioning, demolition, remediation and landscaping will be completed
- The site will move into a period where appropriate controls will be implemented for the remaining facilities on site, mainly the waste stores, low level waste disposal facility and security facilities
- All infrastructure, except required for operational needs, will be removed and utility services capped or isolated as appropriate
- All land will be remediated to levels that allow unrestricted use in 300 years time
- Areas with unacceptable levels of contamination will be excavated
- Where residual contamination remains, a clean cover system may be installed:
  - controls will be incorporated to prevent intrusion or disturbance (during an agreed attenuation period)
- Heritage and nature trails to enhance tourism and hospitality sector
- Protection and enhancement of ecology
- Flexible green open space for potential future development



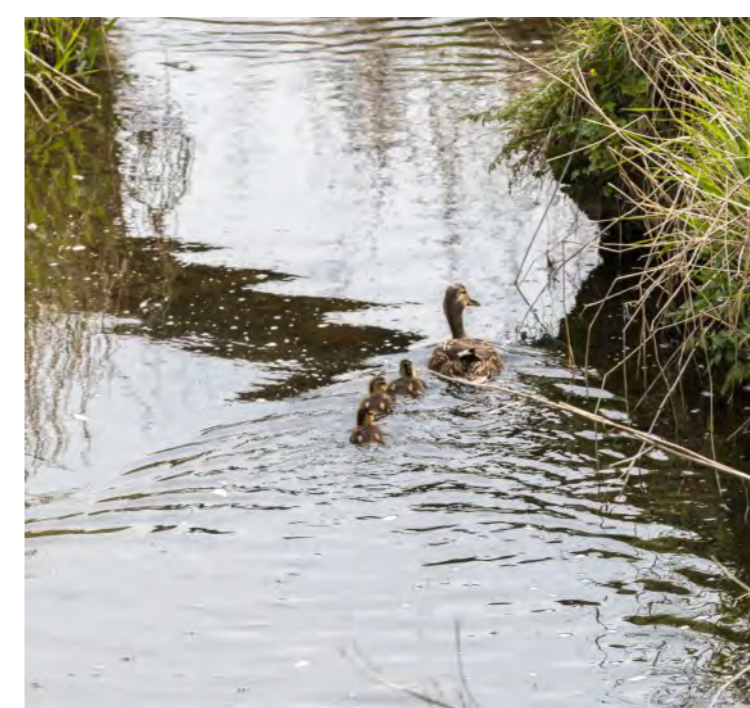
Site at Interim End State



Landscape restoration



Oysterplant on the foreshore

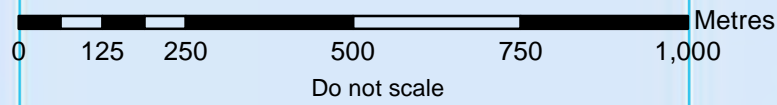


Mill lade



Dounreay castle

**Dounreay**  
 Estates Department  
**Dounreay**  
**Development Phase 3**  
**(2018 – Interim End**  
**State) – Location**  
**Plan**  
 Drawn by: Janice Miller  
 Checked by: Carl Beck  
 Date: October 2017 Rev  
 Graphics Ref: ERO/P04/14  
 © Crown Copyright.  
 All rights reserved.  
 Ordnance Survey Licence  
 Number 100047376



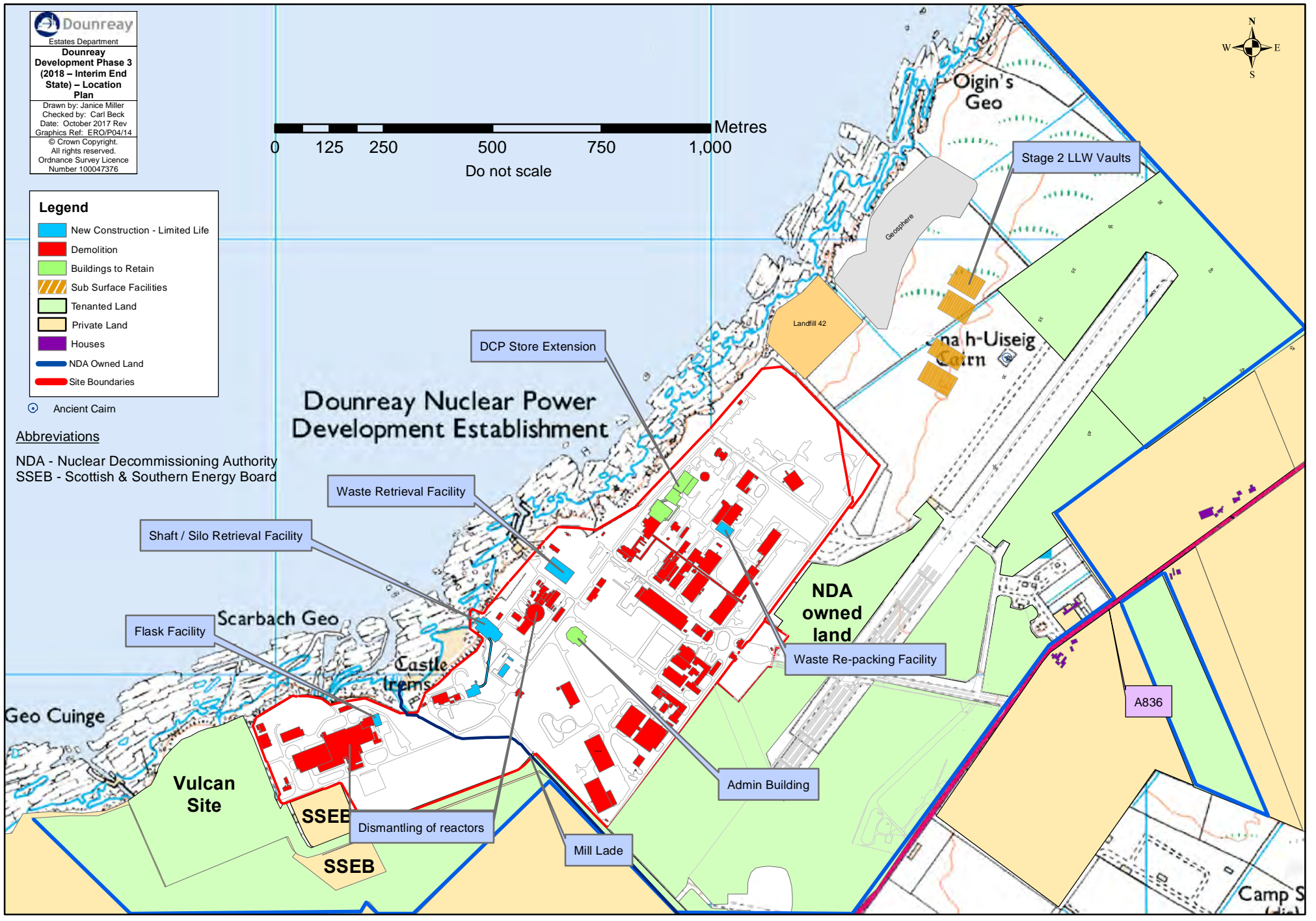
**Legend**

- New Construction - Limited Life
- Demolition
- Buildings to Retain
- Sub Surface Facilities
- Tenanted Land
- Private Land
- Houses
- NDA Owned Land
- Site Boundaries

Ancient Cairn

**Abbreviations**

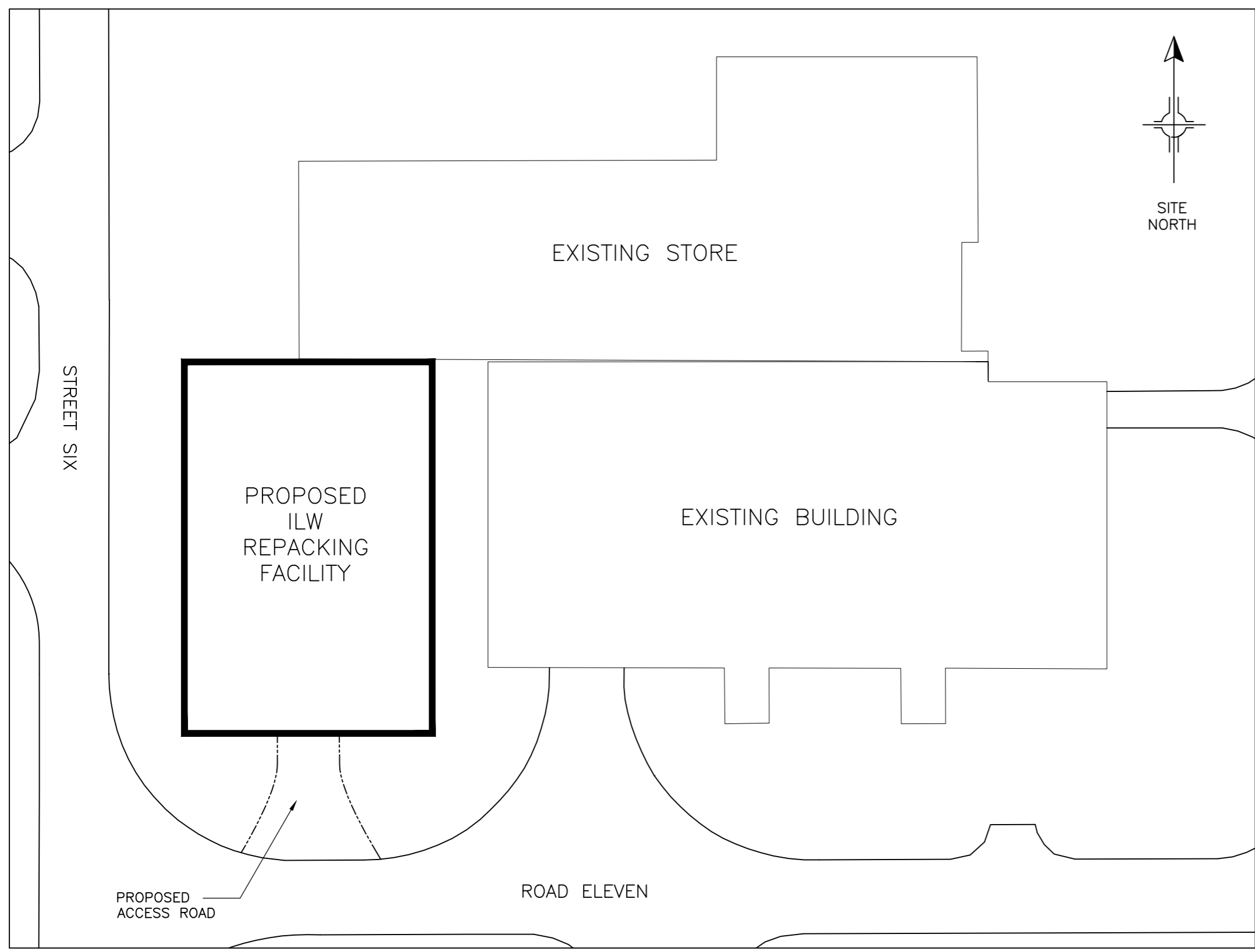
NDA - Nuclear Decommissioning Authority  
 SSEB - Scottish & Southern Energy Board



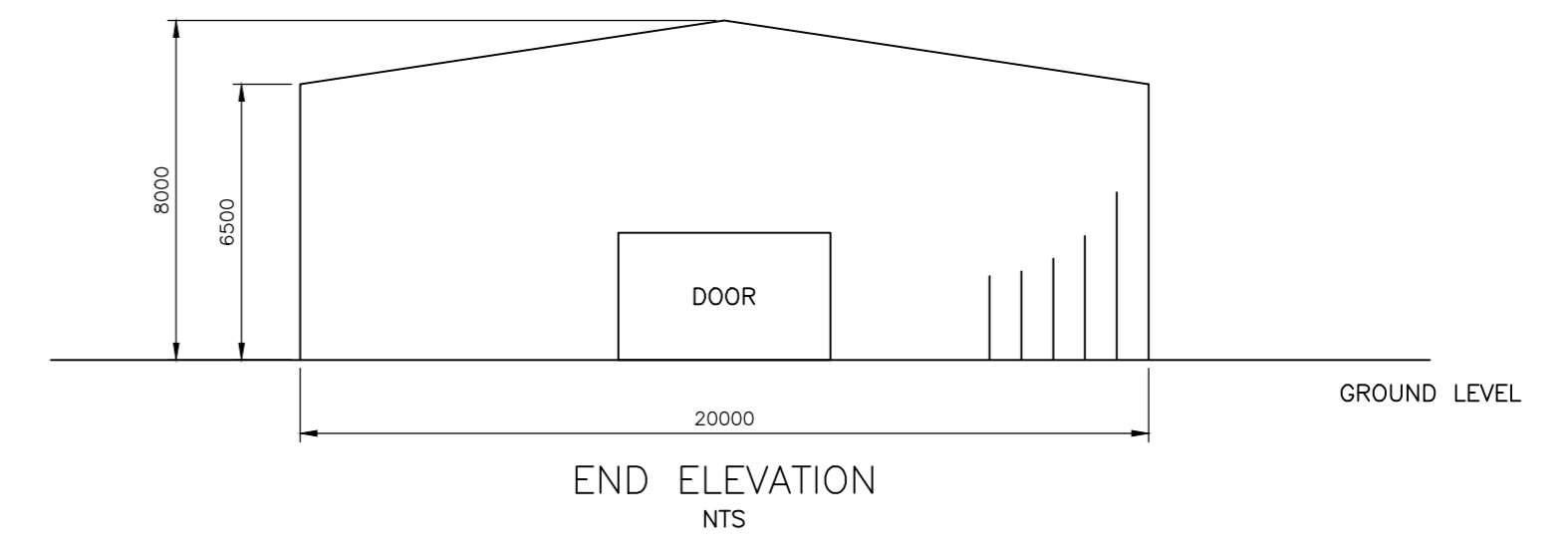
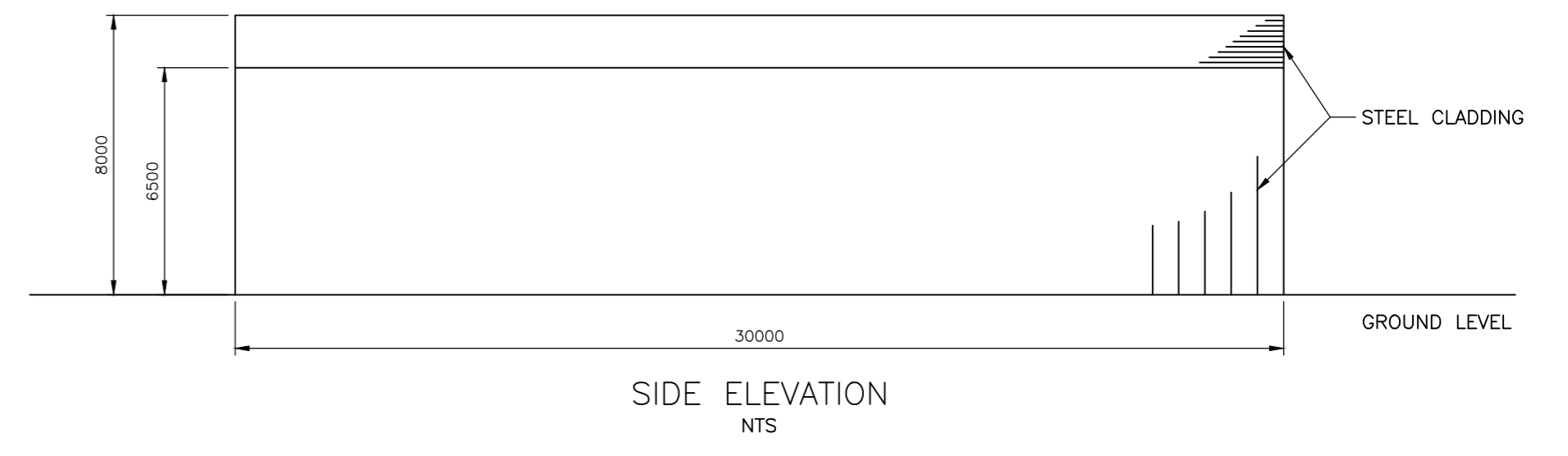


NOTES

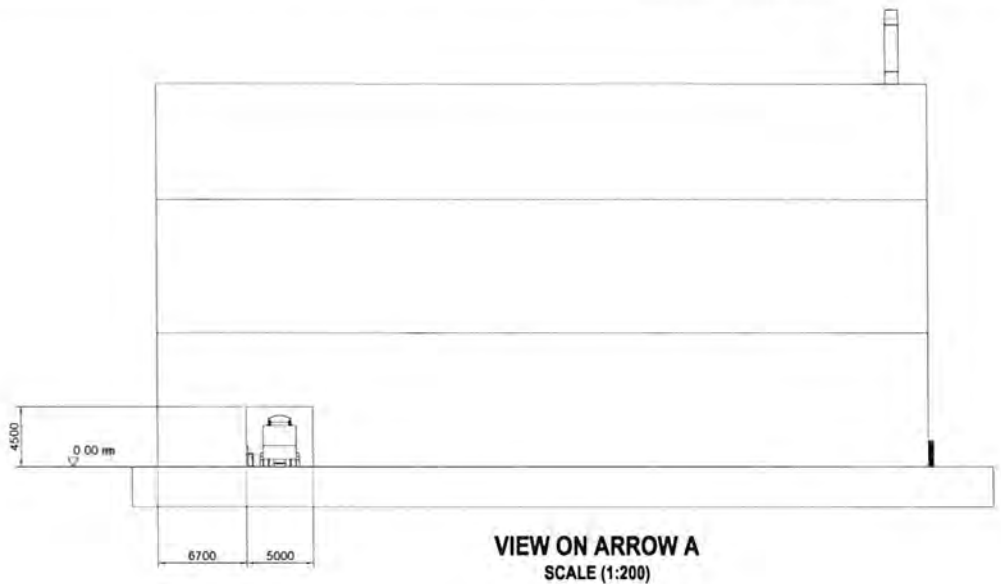
1. PROPOSED ILW REPACKING FACILITY WILL BE A STEEL PORTAL FRAME BUILDING.
2. BUILDING TO HAVE STEEL CLADDING THAT WILL BE DESIGNED TO MATCH SURROUNDING BUILDINGS.



LOCATION PLAN

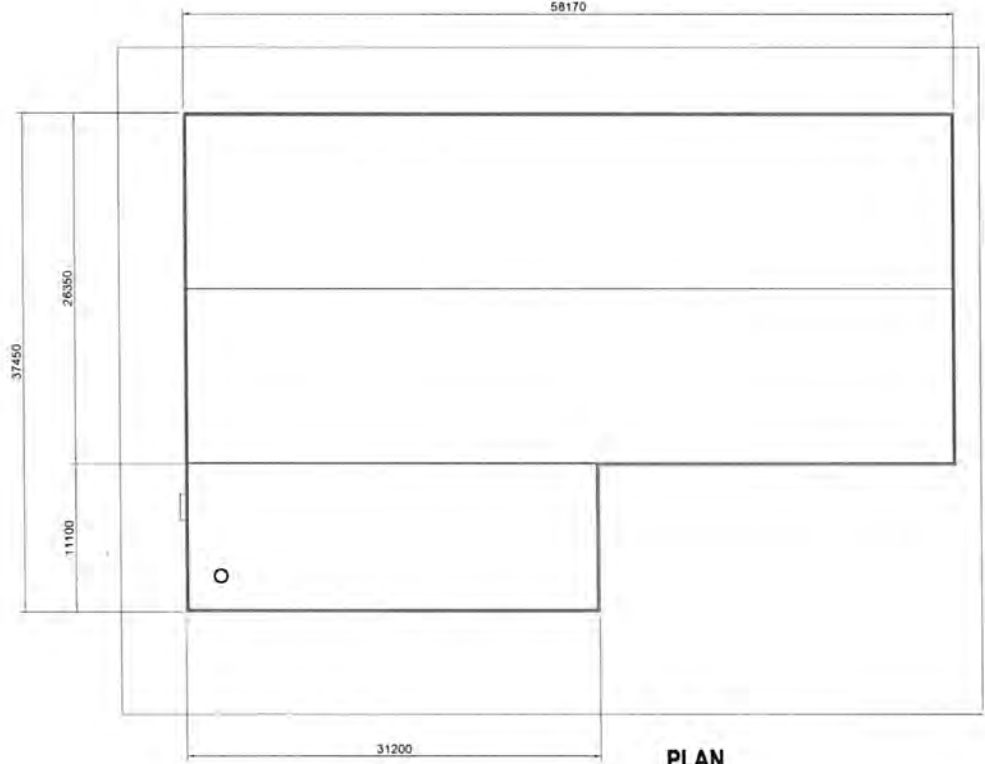


PLANT NO.		PROJECT NO.	L1083_1081_03	DRAWN BY	SG MCGREGOR	
BUILDING	ILW REPACKING FACILITY	DISCIPLINE		CHECKED BY	M HITCHIN	
SITE	DOUNREAY	SEARCH FIELD	CHANGE	APPROVED BY	M HITCHIN	
DESIGNER	DSRL	DESIGNERS DRG REF.				
MOD.	DATE:	USED ON/REF NUMBERS		PROTECTIVE MARKING		THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED.
MOD BY	CHECK BY	APPD BY				
			DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE	ORIGINAL SCALE	TITLE LAYOUT DRAWING PROPOSED ILW REPACKING FACILITY PHASE 3 PLANNING
				1:250 UOS		DRG No. 1Z301849 SHEET 1 OF 1 SHEETS ISSUE P2



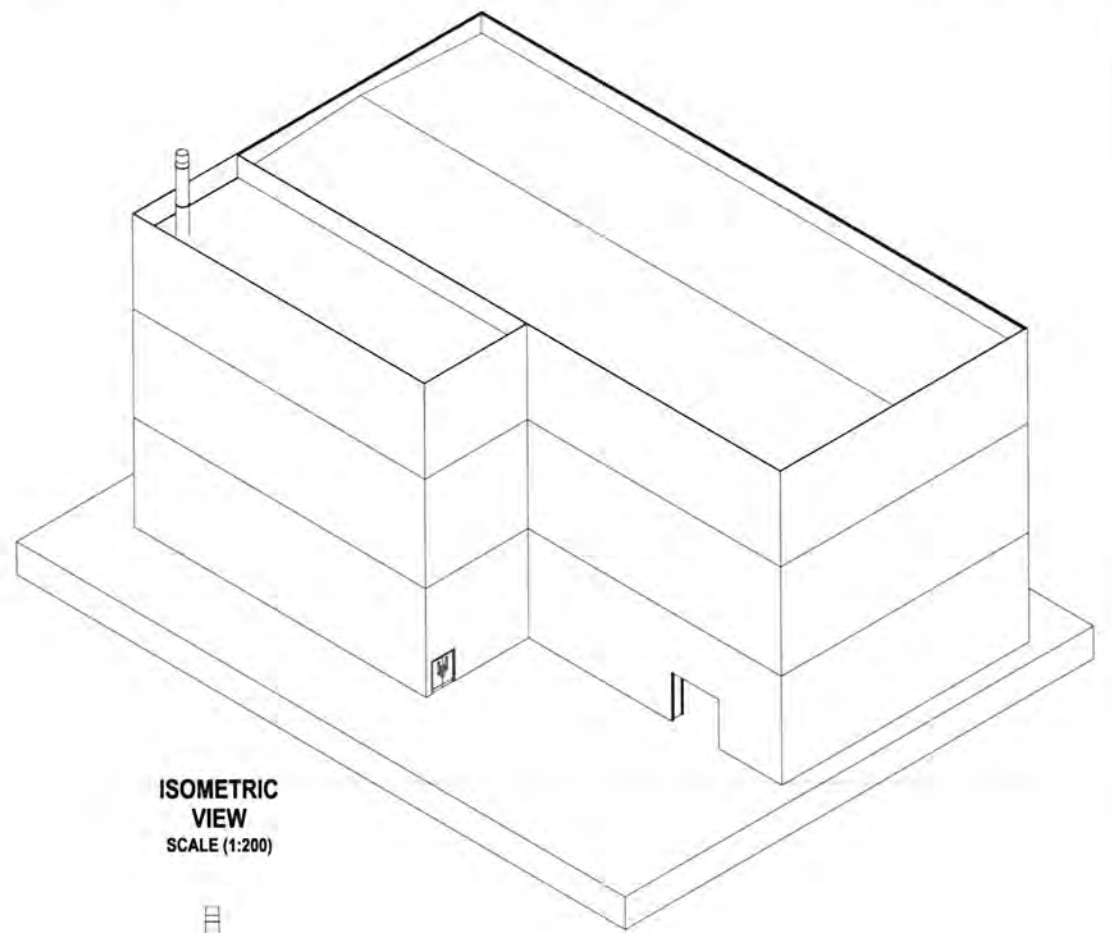
VIEW ON ARROW A  
SCALE (1:200)

A

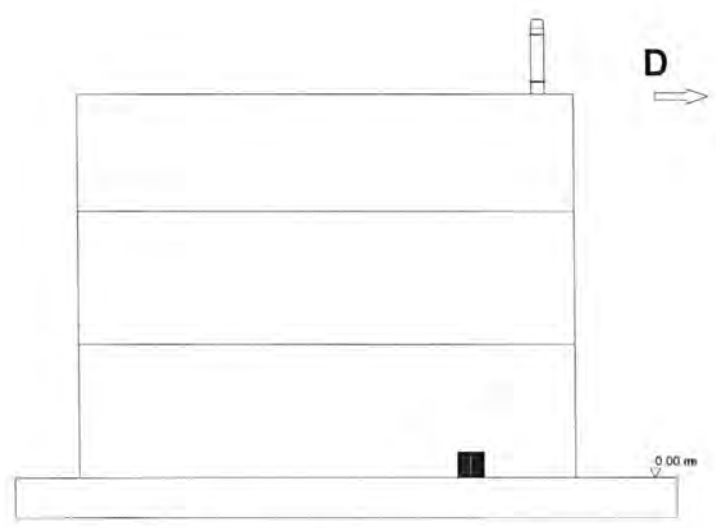


PLAN VIEW  
SCALE (1:200)

B

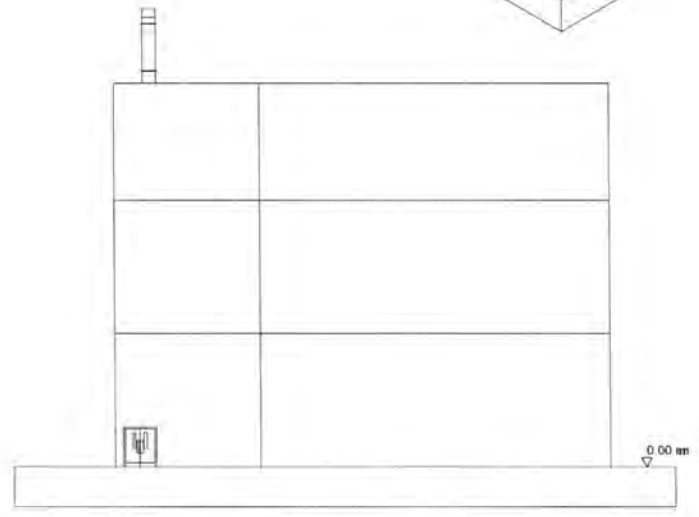


ISOMETRIC VIEW  
SCALE (1:200)



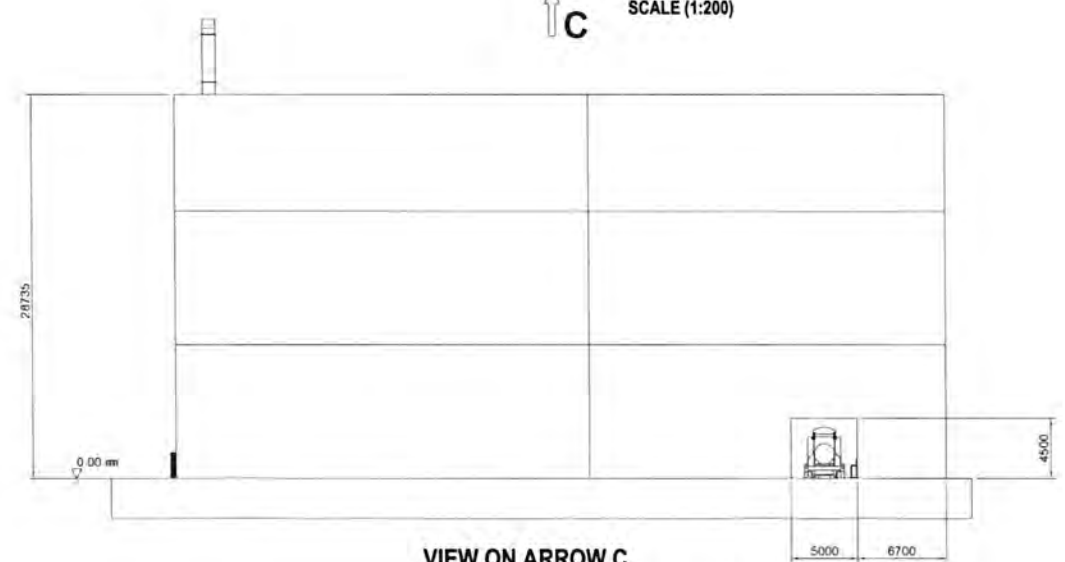
VIEW ON ARROW D  
SCALE (1:200)

D



VIEW ON ARROW B  
SCALE (1:200)

B

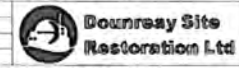


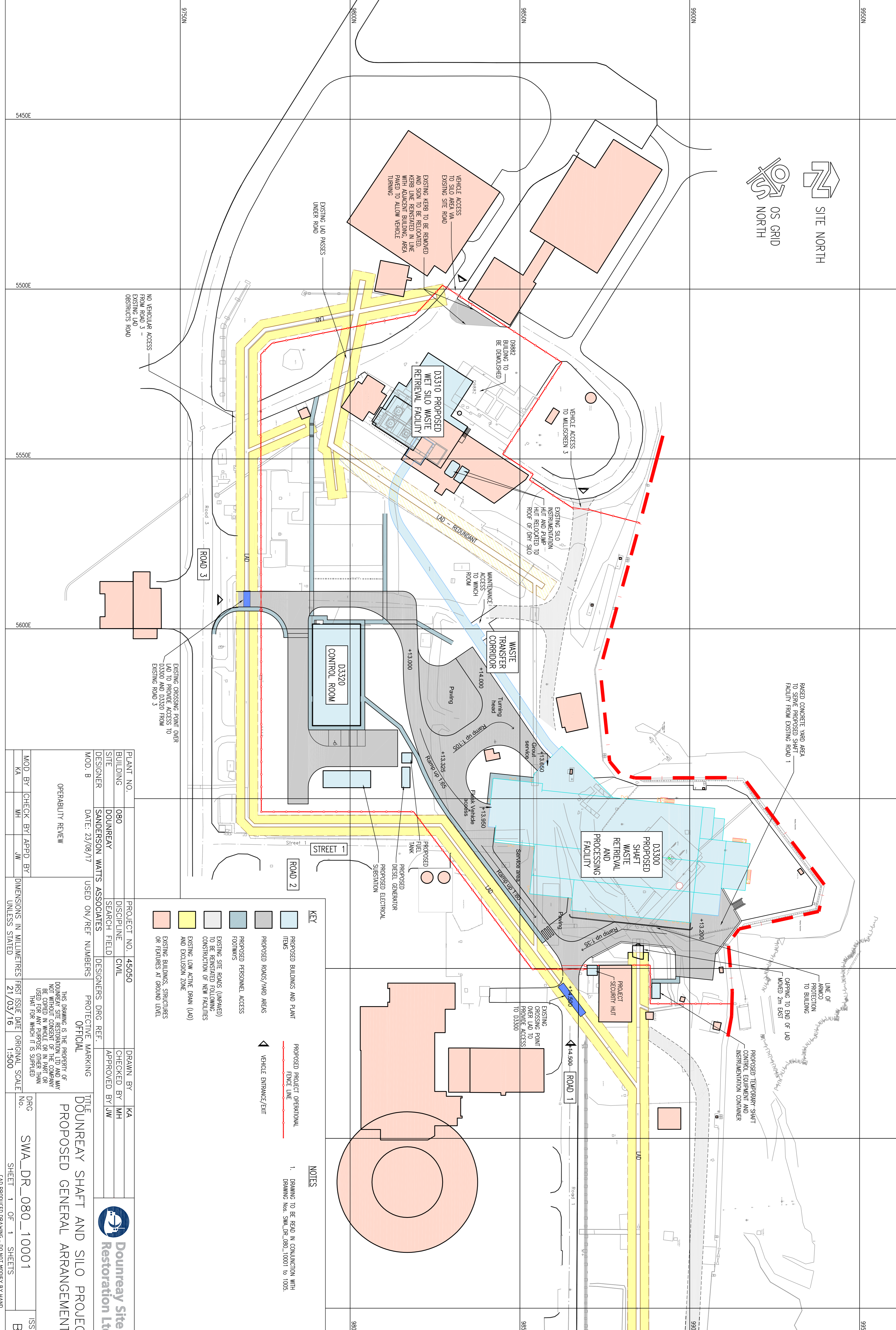
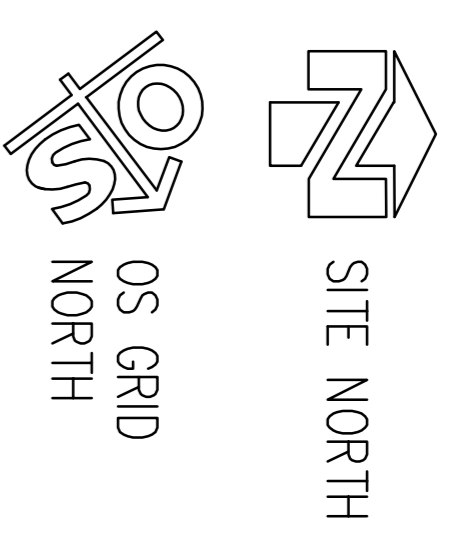
VIEW ON ARROW C  
SCALE (1:200)

C

Z280817	Z6016/WASTE BOX, IMPORT/EXPORT
Z280816	ANNEX BUILDING
Z280815	IF CONTAINER TRANSFER CHAMBER
Z280814	OUTCELL OPERATING AREAS
Z280813	PROCESS AND BUFFER CELLS
Z280812	FLASK TRANSFER HALLS
Z280811	FLASK HANDLING AREA
Z280809	EXTERNAL BUILDING
DRAWING No.	DESCRIPTION

PLANT No.	N/A	PROJECT No.	80710	DRAWN BY	C. HAMILTON
BUILDING	N/A	DISCIPLINE	MECHANICAL	CHECKED BY	L. SMEED
SITE	DOUNREAY	SEARCH FIELD	N/A	APPROVED BY	G. MARTLAND
DESIGNER	NUVIA LTD	DESIGNERS DRG REF.	80710/DE/DRG/099	PROTECTIVE MARKING	OFFICIAL
DATE	14/07/14	USED ON / REF IN: ISSUES		TITLE	FLASK LOADING FACILITY
DRG No CHANGED TO DSRL No					CONCEPT GENERAL ARR'G DRAWING
DESIGNERS DRG REF CHANGED TO NUVIA DRG No					BUILDING EXTERNAL DIMENSIONS
REF DRGS CHANGED TO DSRL Nos					Drg No. Z280810
ISSUED BY	G. MARTLAND	CHECKED BY	C. RILEY	APPROVED BY	
FIRST ISSUE DATE	25/06/2014	DIMENSIONS IN MILLIMETRES UNLESS STATED	ORIGINAL SCALE	1:100 (U.O.S.)	ISSUE B





**KEY**

	PROPOSED BUILDINGS AND PLANT ITEMS
	PROPOSED ROADS/YARD AREAS
	PROPOSED PERSONNEL ACCESS FOOTWAYS
	EXISTING SITE ROADS (UNPAVED) TO BE REINSTATED FOLLOWING CONSTRUCTION OF NEW FACILITIES
	EXISTING LOW ACTIVE DRAIN (LAD) AND EXCLUSION ZONE
	EXISTING BUILDINGS, STRUCTURES OR FEATURES AT GROUND LEVEL

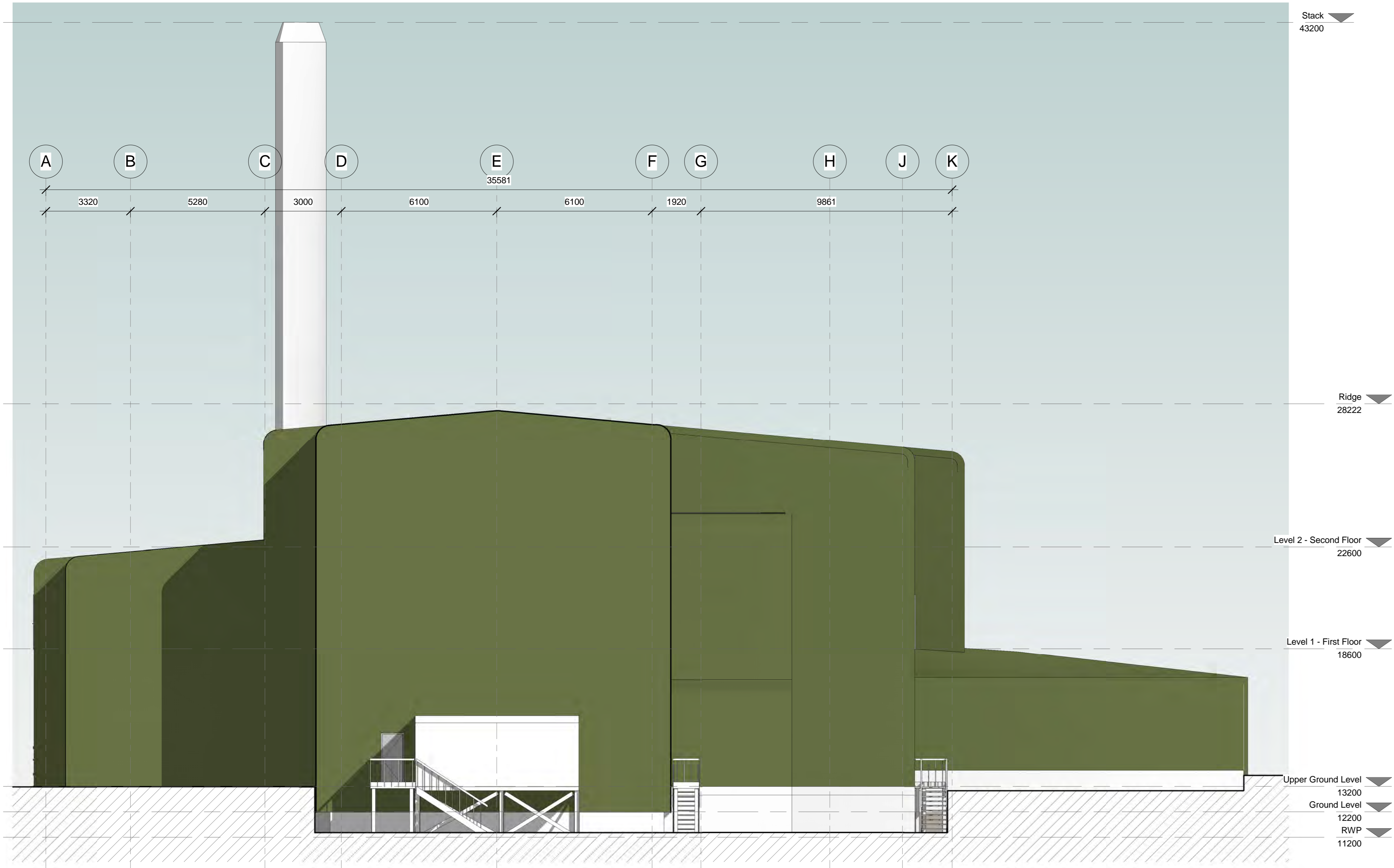
**NOTES**

	PROPOSED PROJECT OPERATIONAL FENCE LINE
	VEHICLE ENTRANCE/EXIT

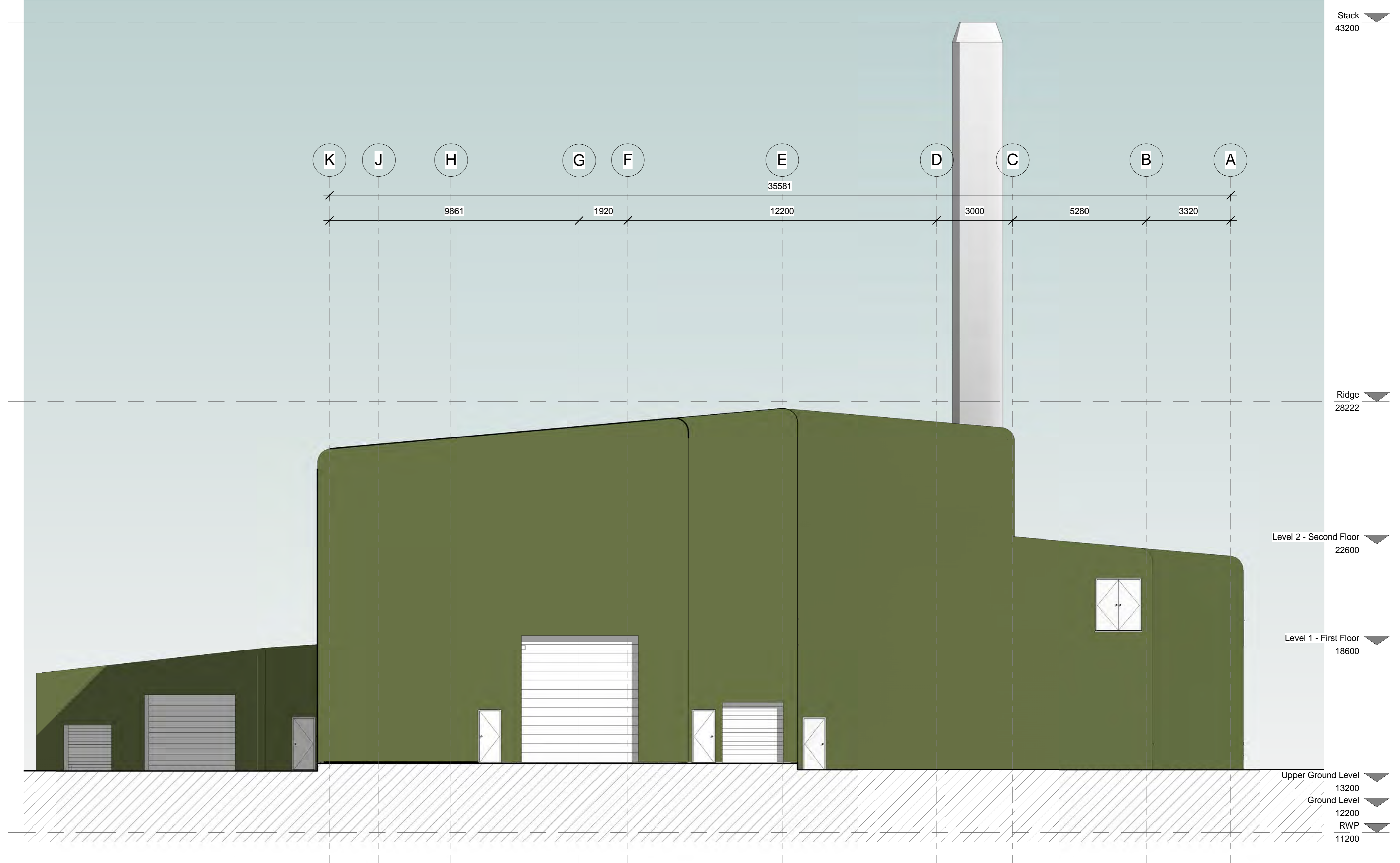
1. DRAWING TO BE READ IN CONJUNCTION WITH DRAWING Nos. SWA\_DR\_080\_10001 to 10005.

PLANT NO.	080	PROJECT NO.	45050	DRAWN BY	KA
BUILDING	DOUNREAY	DISCIPLINE	CIVIL	CHECKED BY	MH
SITE	DOUNREAY	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES	DESIGNERS DRG REF.			
MOD. B	DATE: 23/08/17	USED ON/REF NUMBERS		PROTECTIVE MARKING	OFFICIAL
OPERABILITY REVIEW					
MOD BY	CHECK BY	APPD BY	DIMENSIONS IN MILLIMETRES FIRST ISSUE DATE ORIGINAL SCALE		
KA	MH	JW	UNLESS STATED 21/03/16 1:500		
TITLE			DRG No.		
DOUNREAY SHAFT AND SILO PROJECT			SWA_DR_080_10001		
PROPOSED GENERAL ARRANGEMENT			SHEET 1 OF 1 SHEETS		
			ISSUE B		





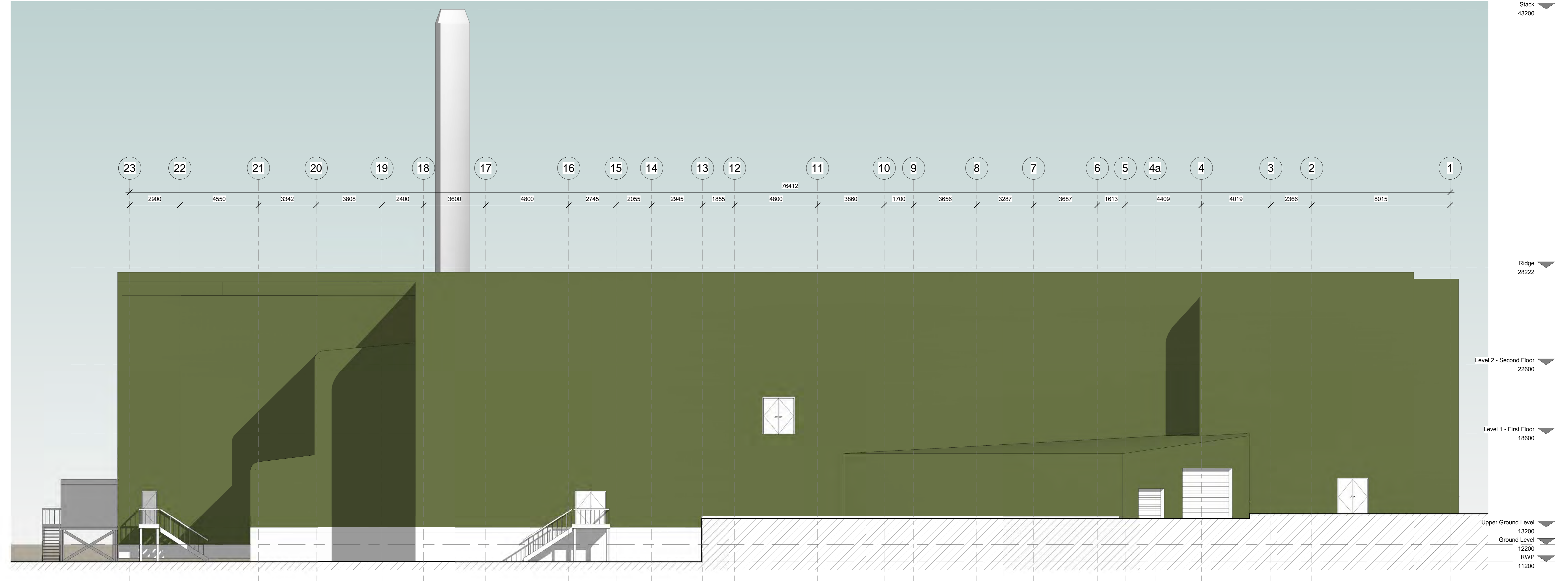
1 North Elevation  
1 : 100



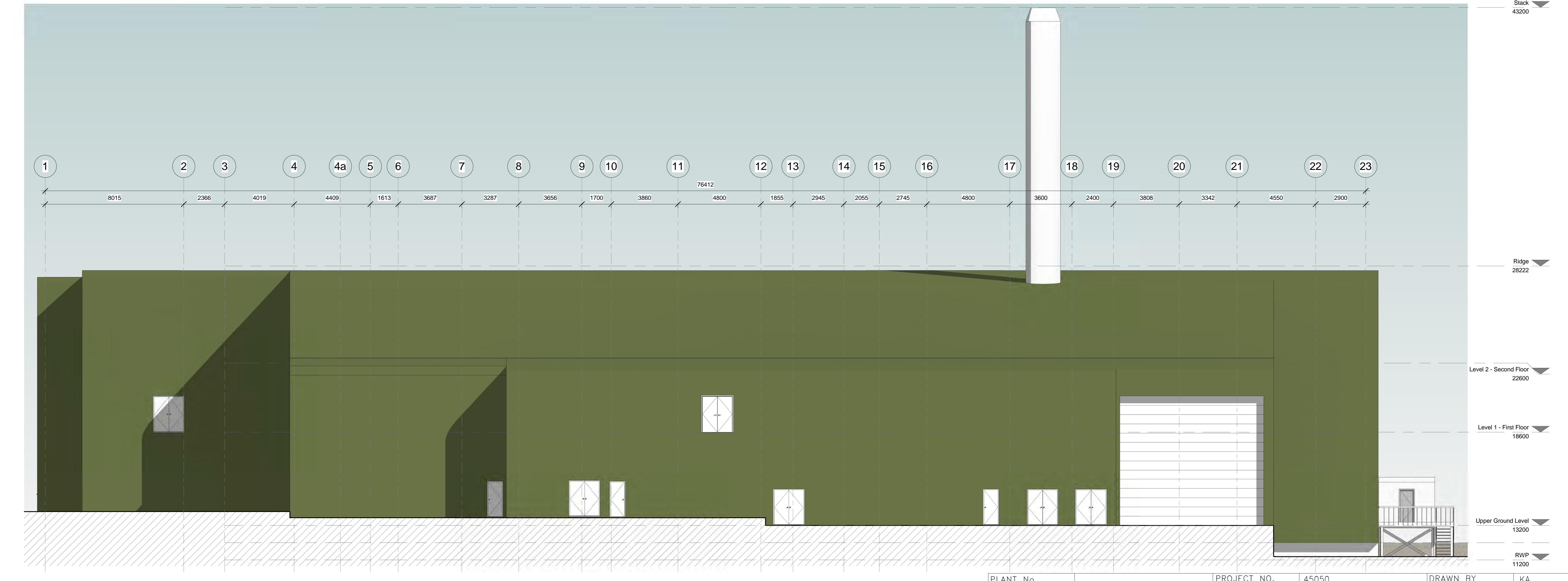
2 South Elevation  
1 : 100

PLANT No.		PROJECT NO.	45050	DRAWN BY	KA
BUILDING	010	DISCIPLINE	Architectural	CHECKED BY	MH
SITE	Downreay	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD.	B	DATE: 23.08.17	USED ON/REF NUMBERS	PROTECTIVE MARKING	
ISSUED FOR PLANNING			OFFICIAL		
THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED			TITLE		
			DOUNREAY SHAFT AND SILO PROJECT SHAFT RETRIEVAL AND PROCESSING PLANNING - NORTH & SOUTH ELEVATIONS		
MOD BY	CHECK BY	APPD BY	DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE	ORIGINAL SCALE
KA	MH	JW		07/12/17	1 : 100@A0
				DRG No.	SWA_DR_010_10020
				SHEET	1 OF 2 SHEETS
				ISSUE	B





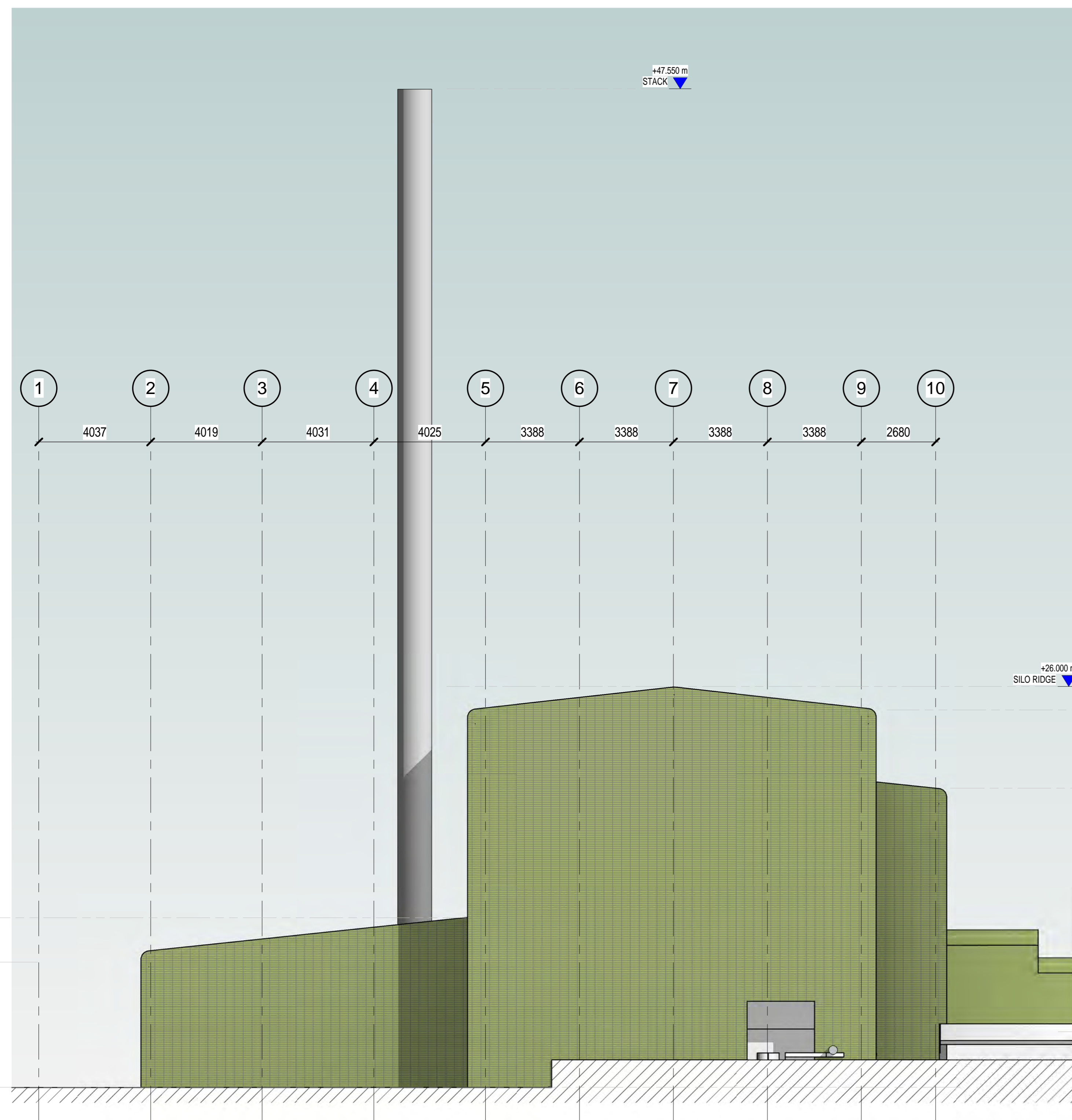
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1:100



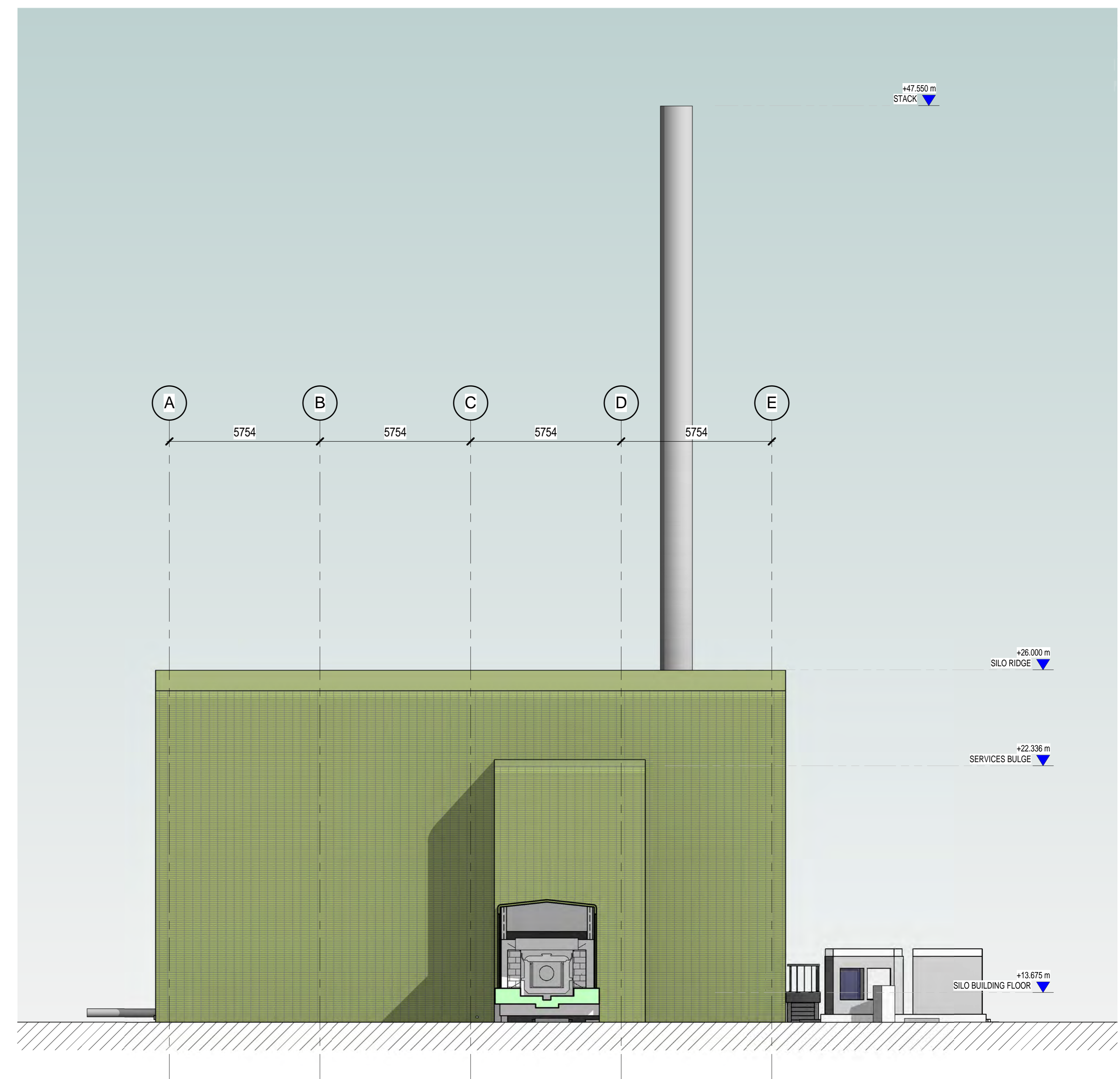
1 East Elevation  
1:100

PLANT No.	010	PROJECT NO.	45050	DRAWN BY	KA
BUILDING	010	DISCIPLINE	Architectural	CHECKED BY	MH
SITE	Downreay	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD.	B	DATE: 23.08.17	USED ON/REF NUMBERS	PROTECTIVE MARKING OFFICIAL	
ISSUED FOR PLANNING			THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED		
MOD BY	CHECK BY	APPD BY	DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE	ORIGINAL SCALE
KA	MH	JW		07/12/17	1 : 100@A0
TITLE				ISSUE	
DOUNREAY SHAFT AND SILO PROJECT SHAFT RETRIEVAL AND PROCESSING PLANNING - EAST & WEST ELEVATIONS				DRG No. SWA_DR_010_10021	
				SHEET 2 OF 2 SHEETS	
				ISSUE B	





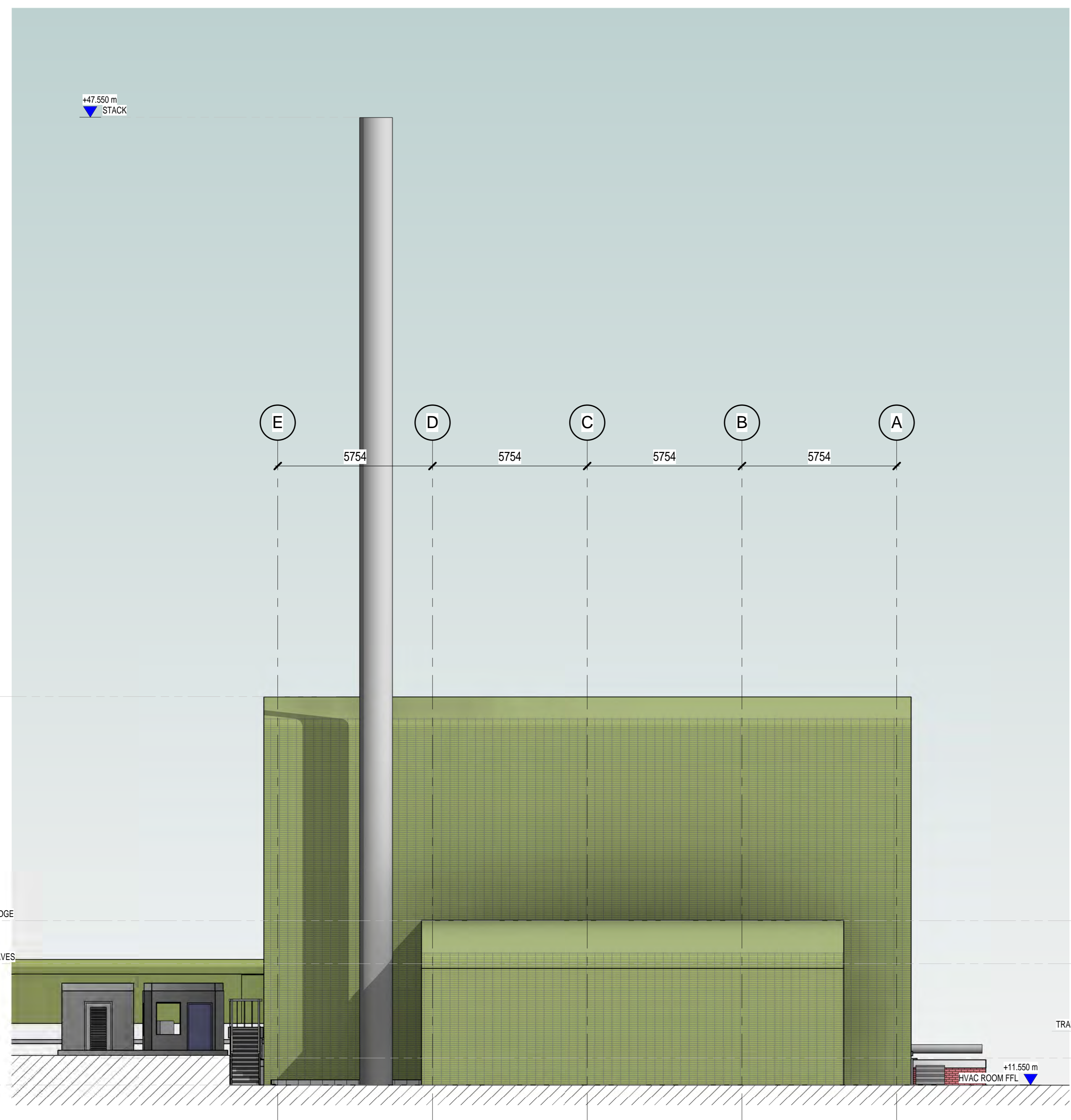
NORTH EAST ELEVATION  
SCALE 1 : 100



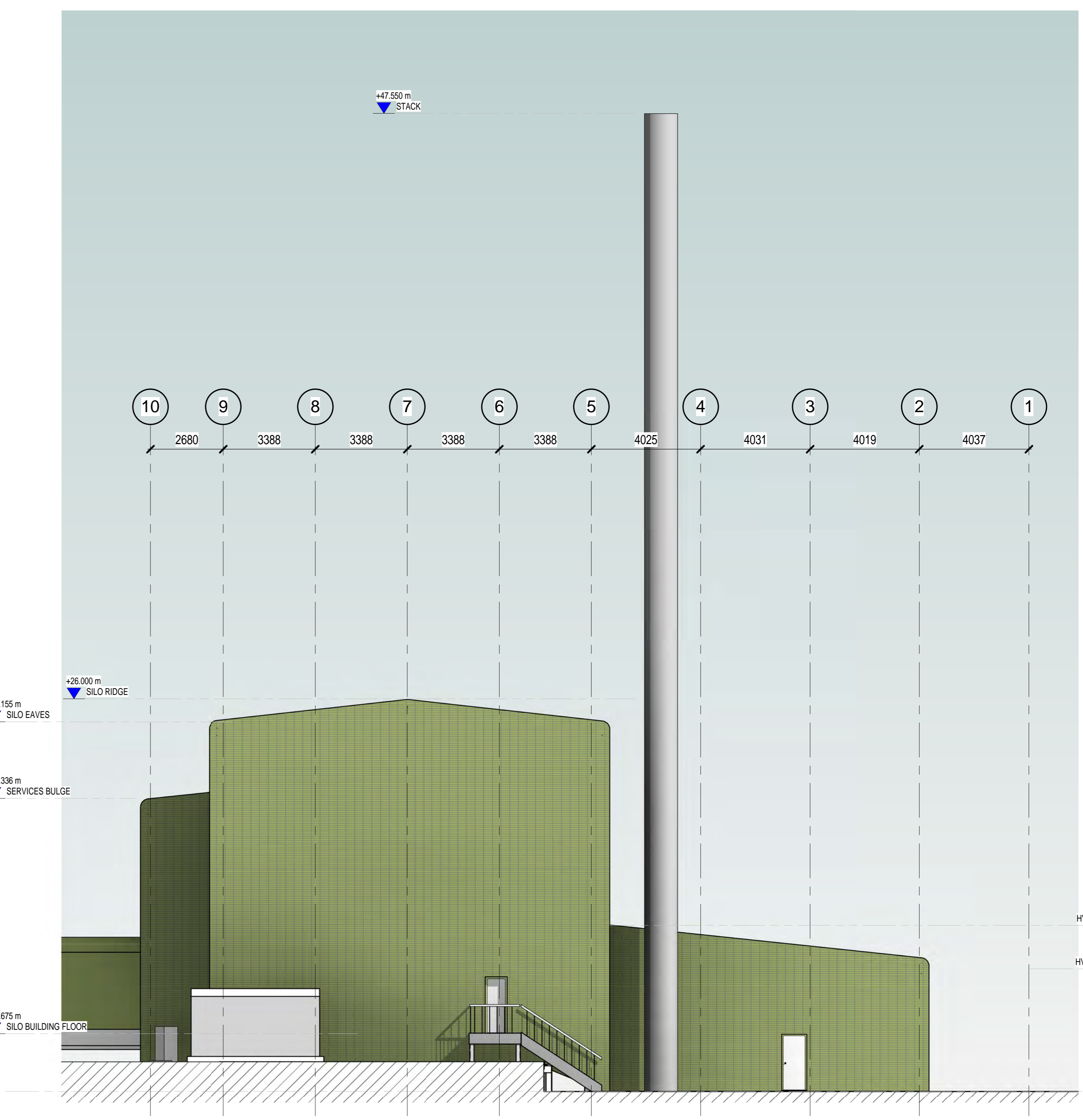
NORTH WEST ELEVATION  
SCALE 1 : 100

PLANT No.		PROJECT NO.	45050	DRAWN BY	KA
BUILDING	050	DISCIPLINE	ARCHITECTURAL	CHECKED BY	MH
SITE	DOUNREAY	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD. B	DATE: 23/08/17	USED ON/REF NUMBERS	PROTECTIVE MARKING OFFICIAL		
ISSUED FOR PLANNING		THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED			TITLE DOUNREAY SHAFT & SILO PROJECT SILO RETRIEVAL FACILITY PLANNING - ELEVATIONS SHEET 1
MOD BY	CHECK BY	APPD BY	FIRST ISSUE DATE	ORIGINAL SCALE	DRG No. SWA_DR_050_10011
KA	MH	JW		1 : 100	ISSUE B
DIMENSIONS IN MILLIMETRES UNLESS STATED			SHEET 1 OF 2 SHEETS		





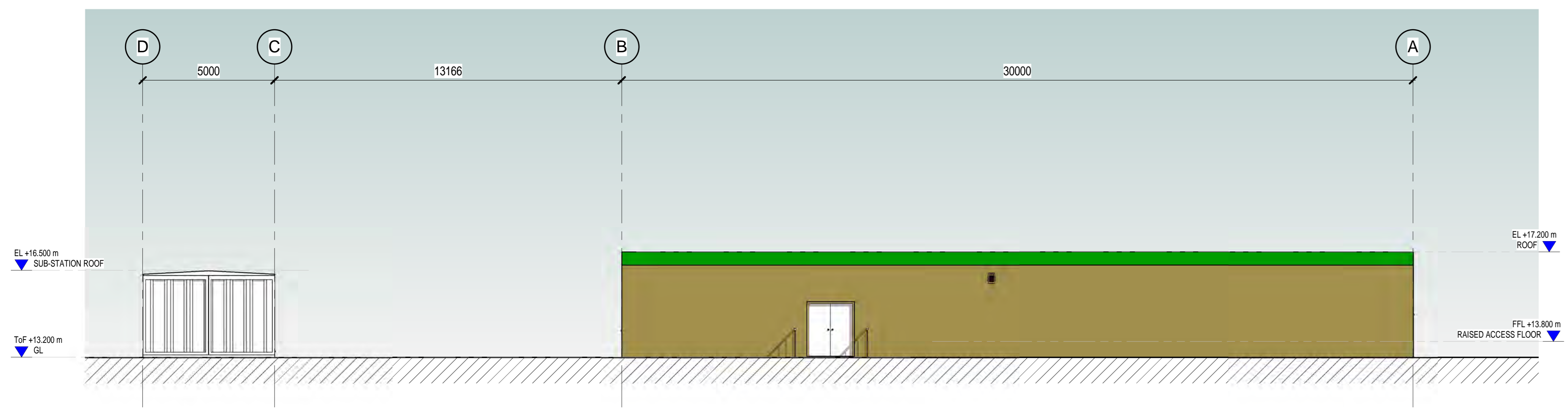
SOUTH EAST ELEVATION  
SCALE 1:100



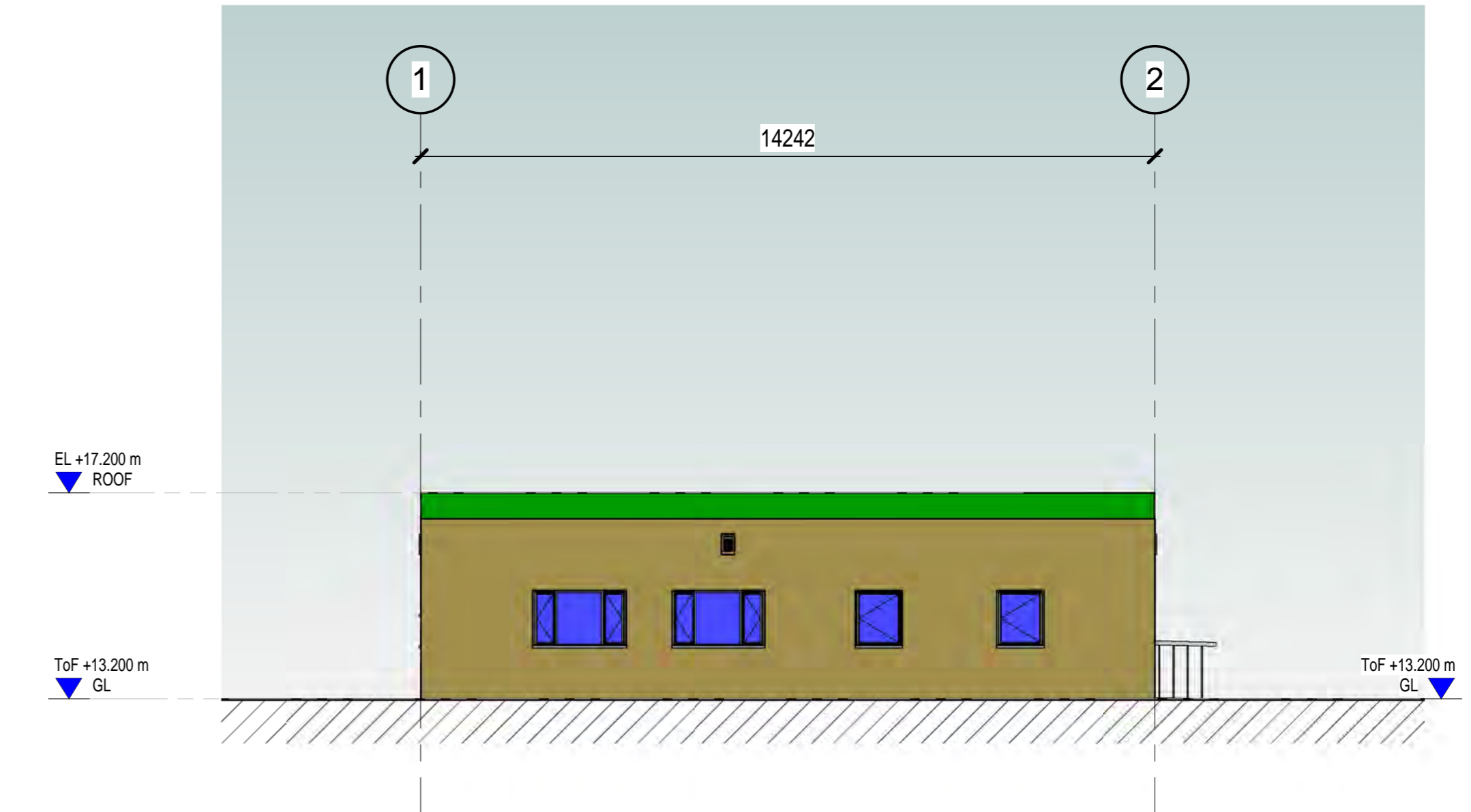
SOUTH WEST ELEVATION  
SCALE 1:100

PLANT No.		PROJECT NO.	45050	DRAWN BY	KA
BUILDING	050	DISCIPLINE	ARCHITECTURAL	CHECKED BY	MH
SITE	DOUNREAY	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD. B	DATE: 23/08/17	USED ON/REF NUMBERS	PROTECTIVE MARKING OFFICIAL		
ISSUED FOR PLANNING		THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED			
MOD BY	CHECK BY	APPD BY	FIRST ISSUE DATE	ORIGINAL SCALE	TITLE
KA	MH	JW		1 : 100	DOUNREAY SHAFT & SILO PROJECT SILO RETRIEVAL FACILITY PLANNING - ELEVATIONS SHEET 2
DIMENSIONS IN MILLIMETRES UNLESS STATED					DRG No. SWA_DR_050_10012
					ISSUE B
					SHEET 2 OF 2 SHEETS

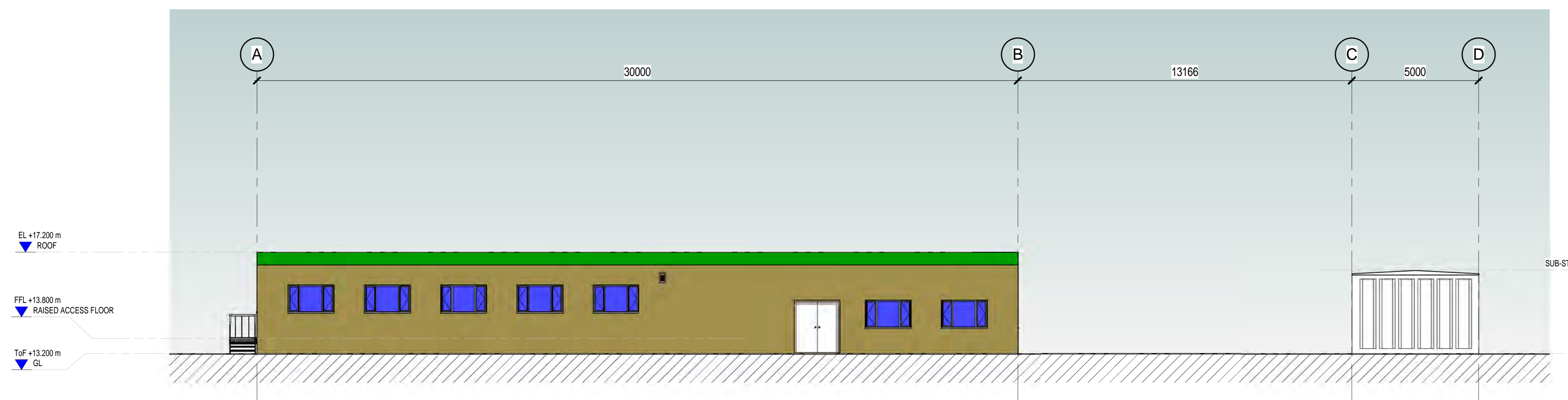




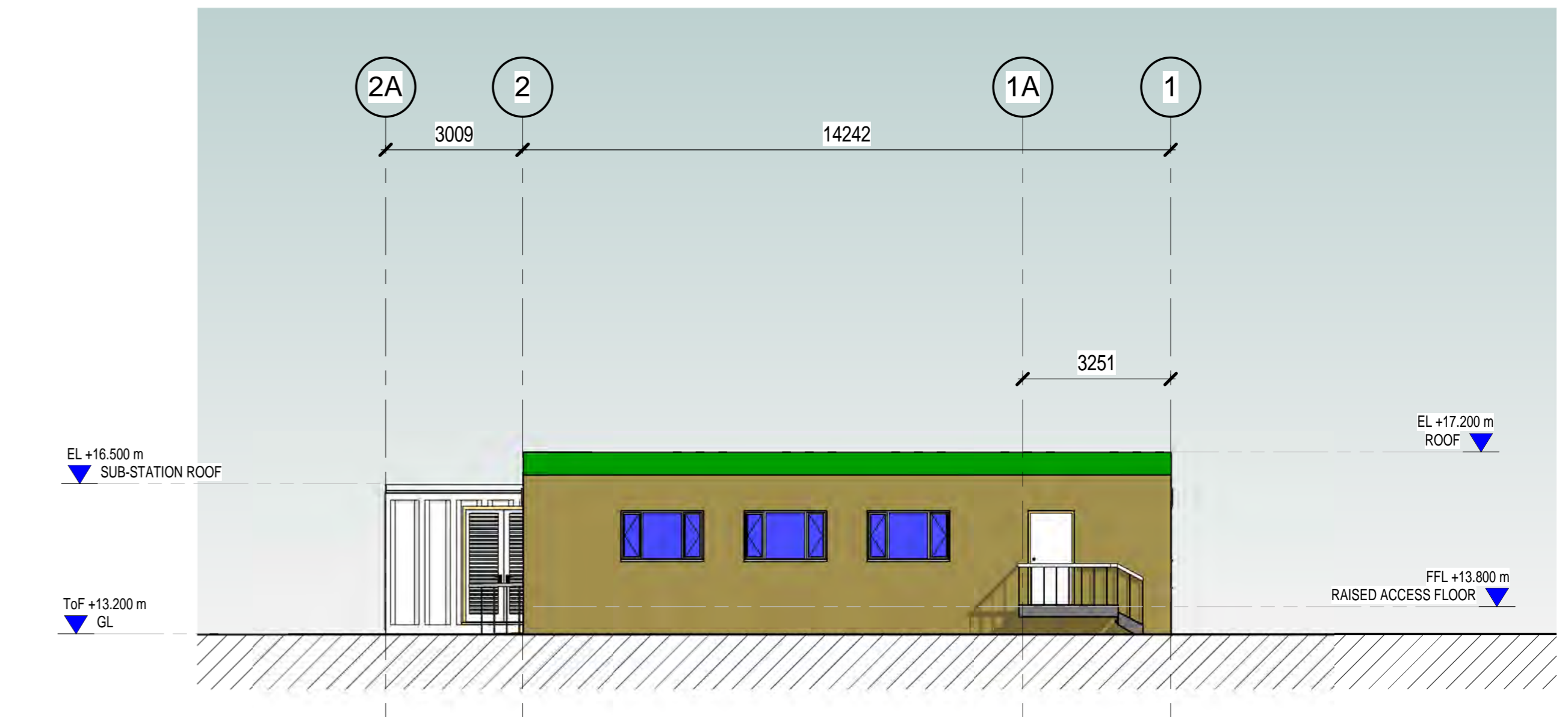
EAST ELEVATION  
SCALE 1:100



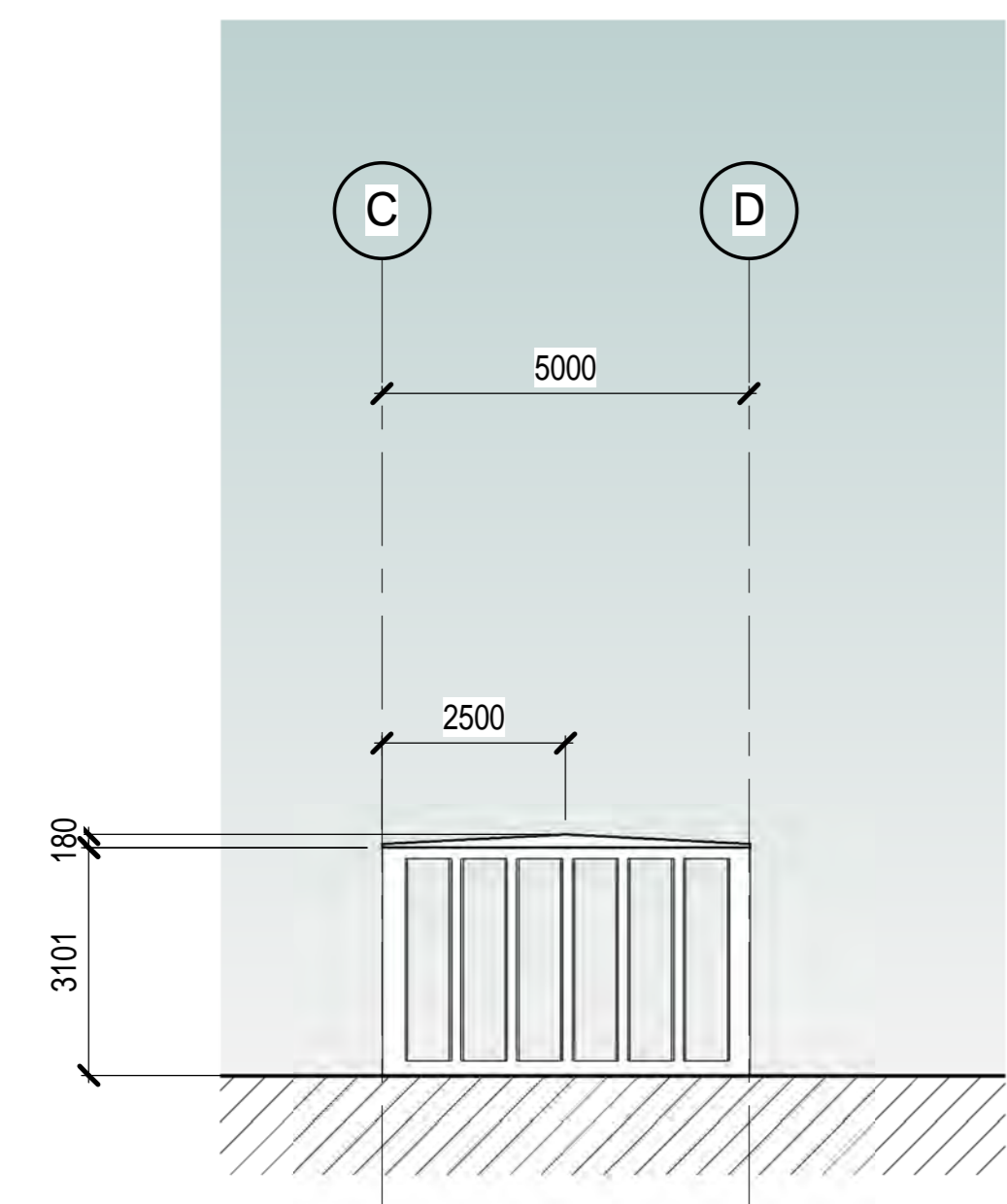
NORTH ELEVATION  
SCALE 1:100



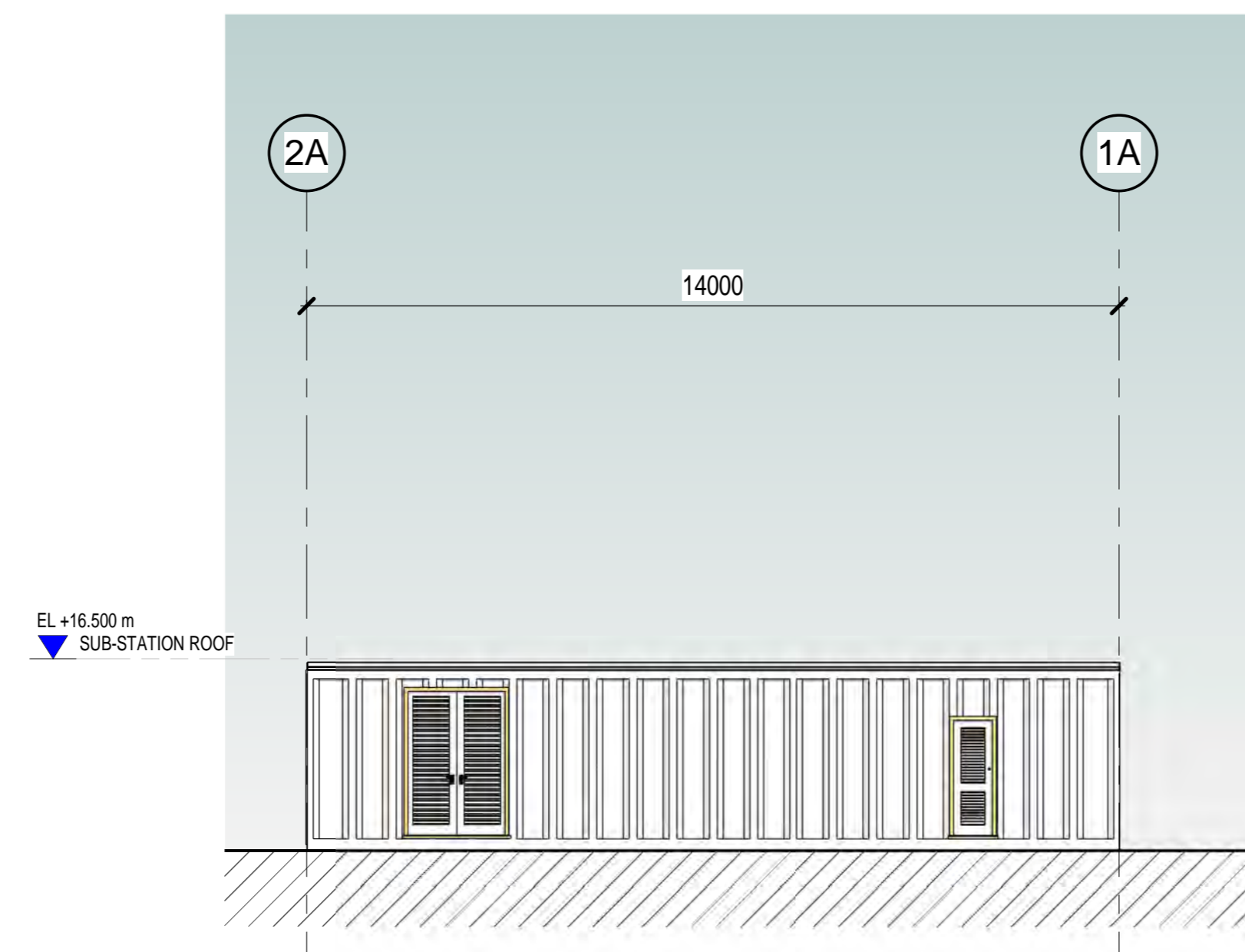
WEST ELEVATION  
SCALE 1:100



SOUTH ELEVATION  
SCALE 1:100



SUB-STATION SOUTH ELEVATION  
SCALE 1:100

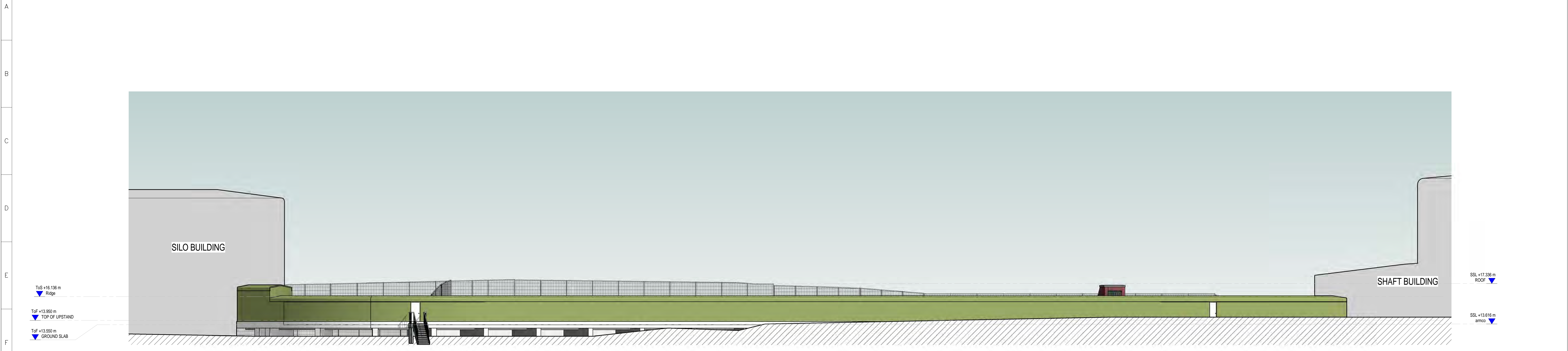


SUB-STATION WEST ELEVATION  
SCALE 1:100

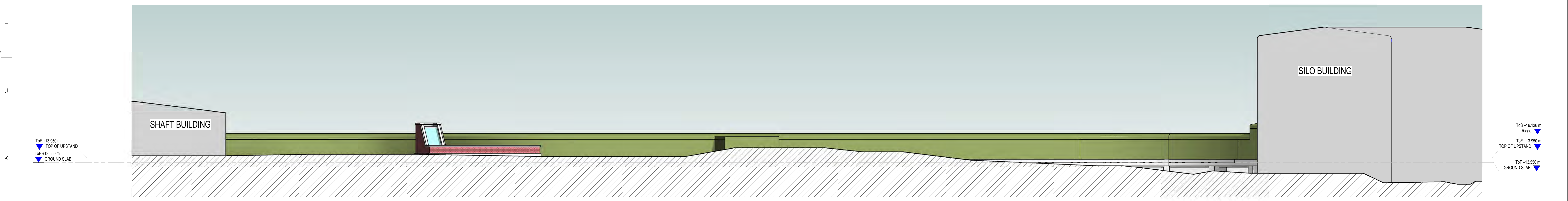
PLANT No.		PROJECT NO.	45050	DRAWN BY	KA
BUILDING	070	DISCIPLINE	ARCHITECTURAL	CHECKED BY	MH
SITE	DOUNREAY	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD. A	DATE: 23/08/17	USED ON/REF NUMBERS	PROTECTIVE MARKING OFFICIAL		
ISSUED FOR PLANNING		THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED			
MOD BY	CHECK BY	APPD BY	FIRST ISSUE DATE	ORIGINAL SCALE	TITLE
KA	MH	JW	10/09/15	1 : 100	DOUNREAY SHAFT & SILO PROJECT CENTRAL CONTROL FACILITY & SUBSTATION ELEVATIONS
DIMENSIONS IN MILLIMETRES UNLESS STATED					DRG No. SWA_DR_070_10004
					ISSUE A
					SHEET 1 OF 1 SHEETS







EAST ELEVATION  
SCALE 1:125



WEST ELEVATION  
SCALE 1:125

PLANT No.		PROJECT NO.	45050	DRAWN BY	KA
BUILDING	050	DISCIPLINE	ARCHITECTURAL	CHECKED BY	MH
SITE	DOUNREAY	SEARCH FIELD		APPROVED BY	JW
DESIGNER	SANDERSON WATTS ASSOCIATES		DESIGNERS DRG REF.		
MOD. B	DATE: 03/14/16	USED ON/REF NUMBERS	PROTECTIVE MARKING OFFICIAL		
ISSUED FOR PLANNING		THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED			
MOD BY	CHECK BY	APPD BY	FIRST ISSUE DATE	ORIGINAL SCALE	TITLE
KA	MH	JW		1 : 125	DOUNREAY SHAFT & SILO PROJECT SILO RETRIEVAL FACILITY TRANSFER CORRIDOR ELEVATIONS
DIMENSIONS IN MILLIMETRES UNLESS STATED					DRG No. SWA_DR_050_10017
					ISSUE B

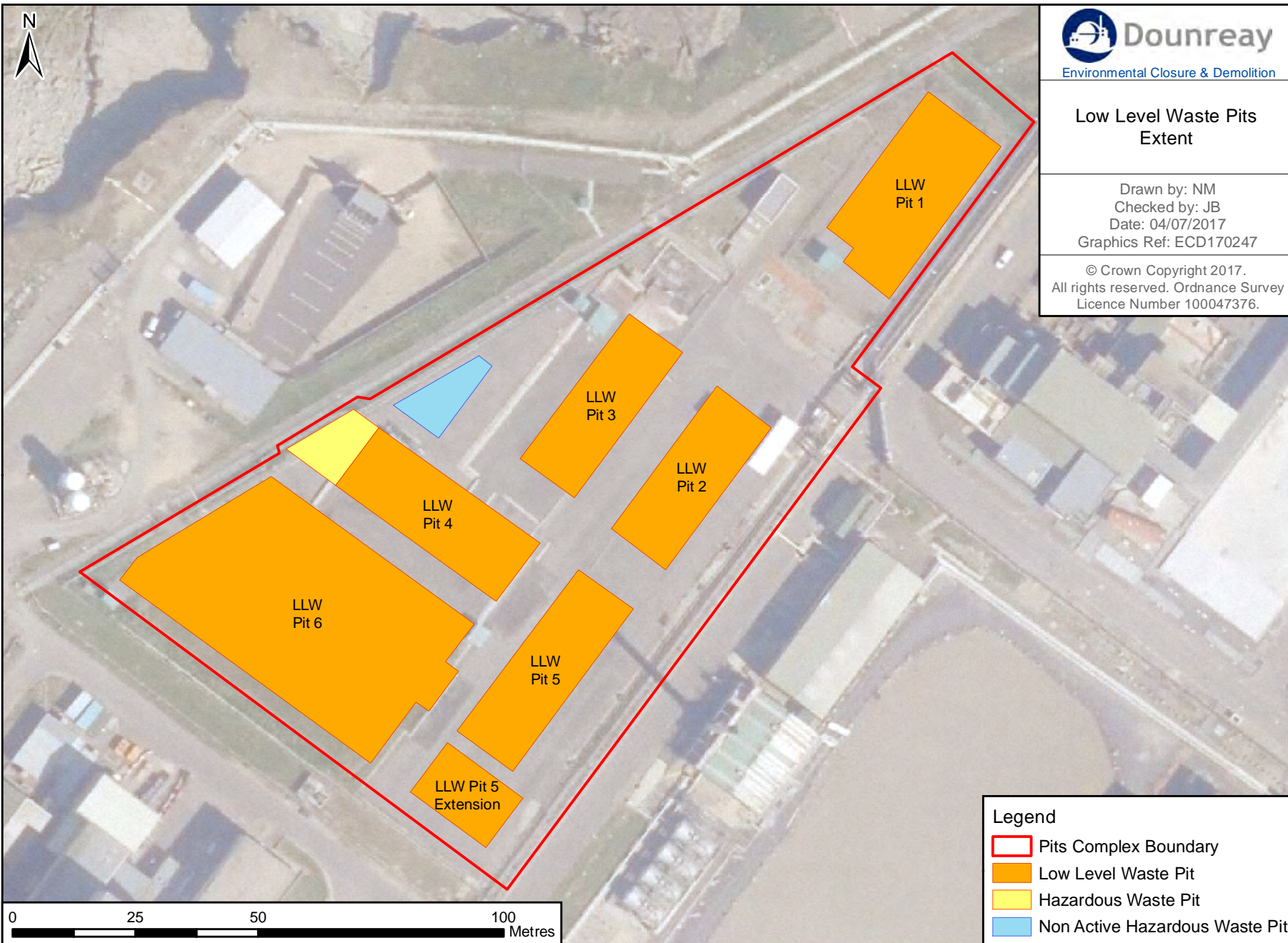








**Low Level Waste Pits  
Extent**

Drawn by: NM  
Checked by: JB  
Date: 04/07/2017  
Graphics Ref: ECD170247

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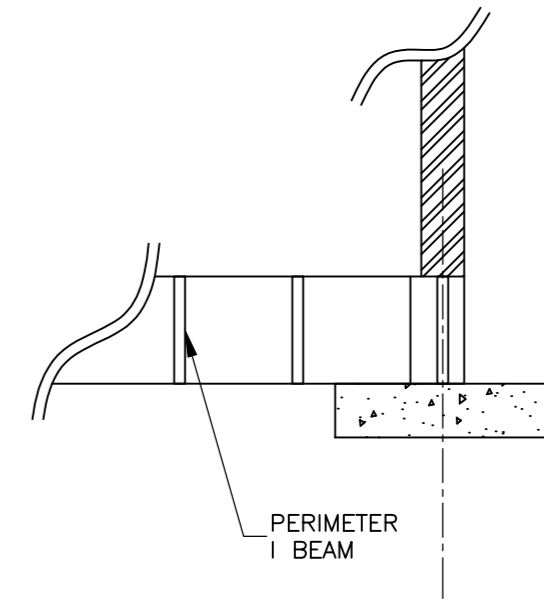
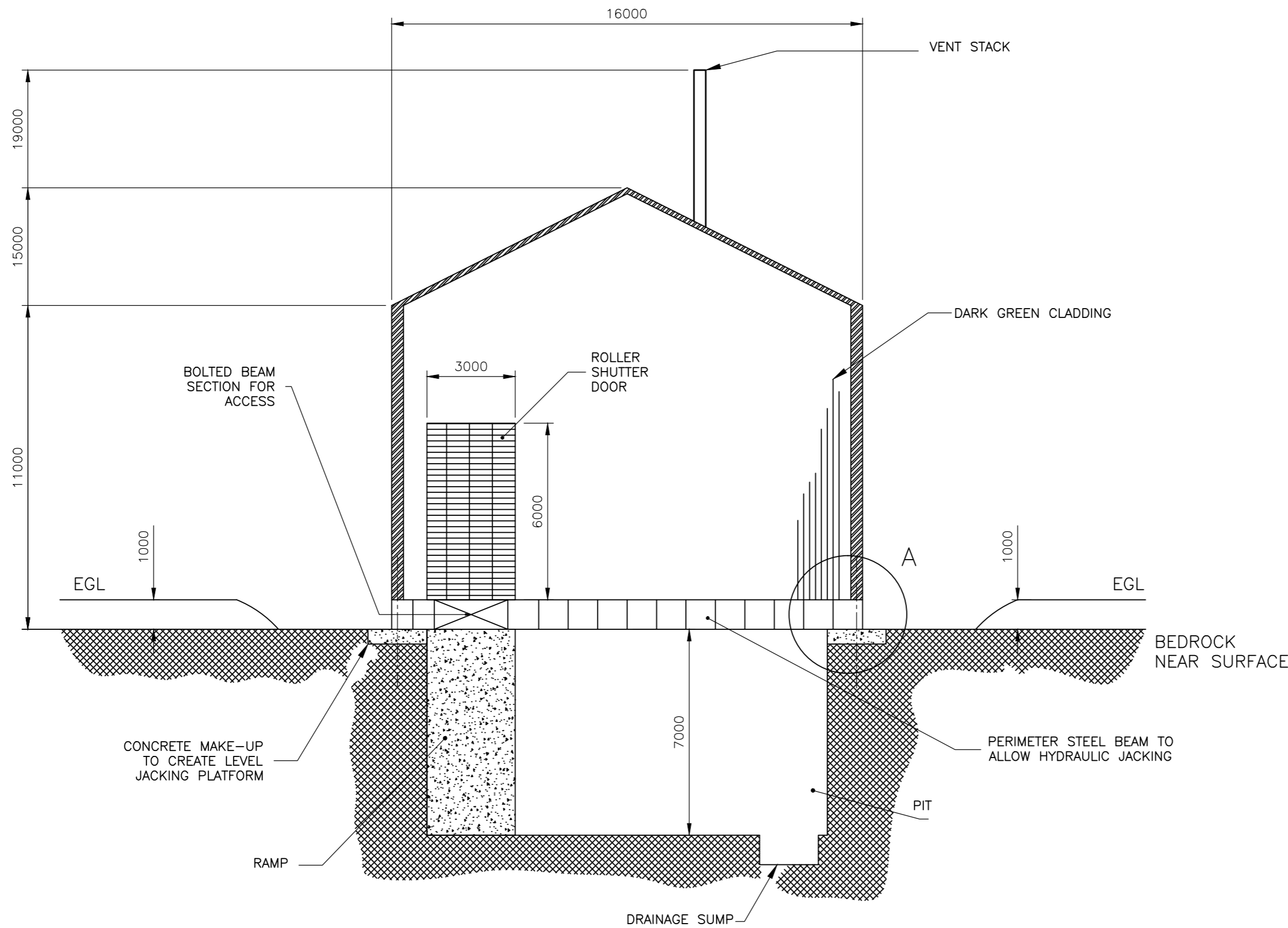


**Legend**

-  Pits Complex Boundary
-  Low Level Waste Pit
-  Hazardous Waste Pit
-  Non Active Hazardous Waste Pit

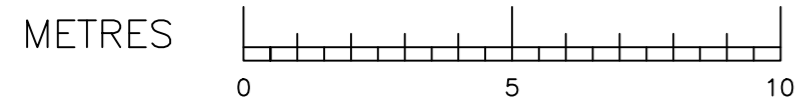
DRG NO. 1Z301847  
SHEET 1 OF 2 SHEETS

DO NOT SCALE - IF IN DOUBT ASK



DETAIL A

CROSS SECTION  
MOBILE WASTE RETRIEVAL BUILDING  
(SHOWN OVER TYPICAL PIT)

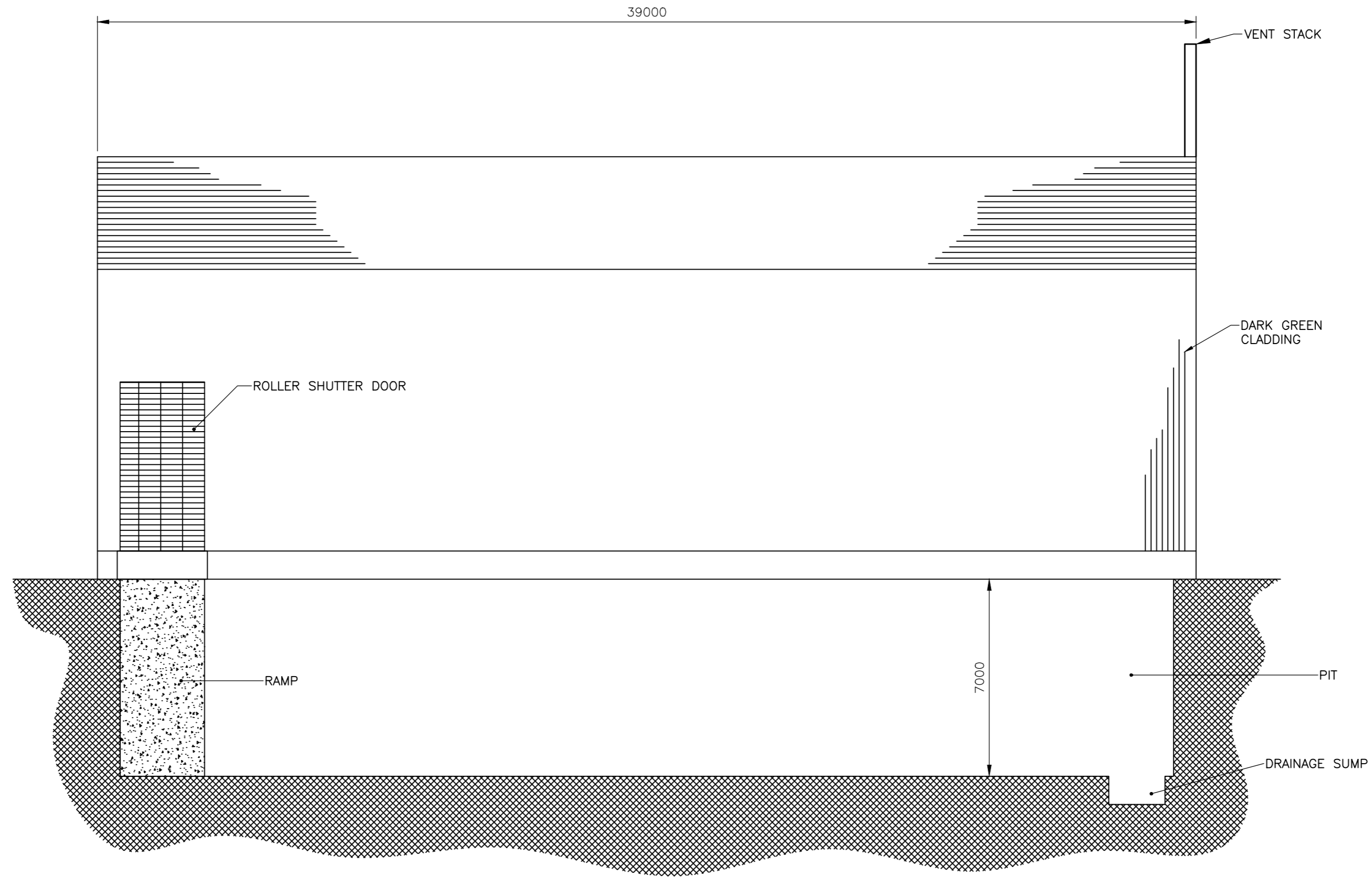


PLANT NO.		PROJECT NO.	L1083_1081_03	DRAWN BY	SG MCGREGOR	
BUILDING	MWRB	DISCIPLINE		CHECKED BY	M HITCHIN	
SITE	DOWNREAY	SEARCH FIELD	CHANGE	APPROVED BY	M HITCHIN	
DESIGNER	DSRL	DESIGNERS DRG REF.				
MOD.	DATE:	USED ON/REF NUMBERS	1Z301848 LONG SECTION	PROTECTIVE MARKING	TITLE	
				THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED	CONCEPT CROSS SECTION MOBILE WASTE RETRIEVAL BUILDING	
MOD BY	CHECK BY	APPD BY				DRG No.
			DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE	ORIGINAL SCALE	ISSUE P1b
					1:100	
					SHEET 1 OF 2 SHEETS	

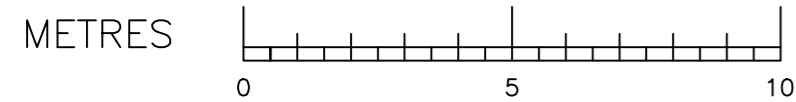


DRG NO. 1Z301848  
SHEET 2 OF 2 SHEETS

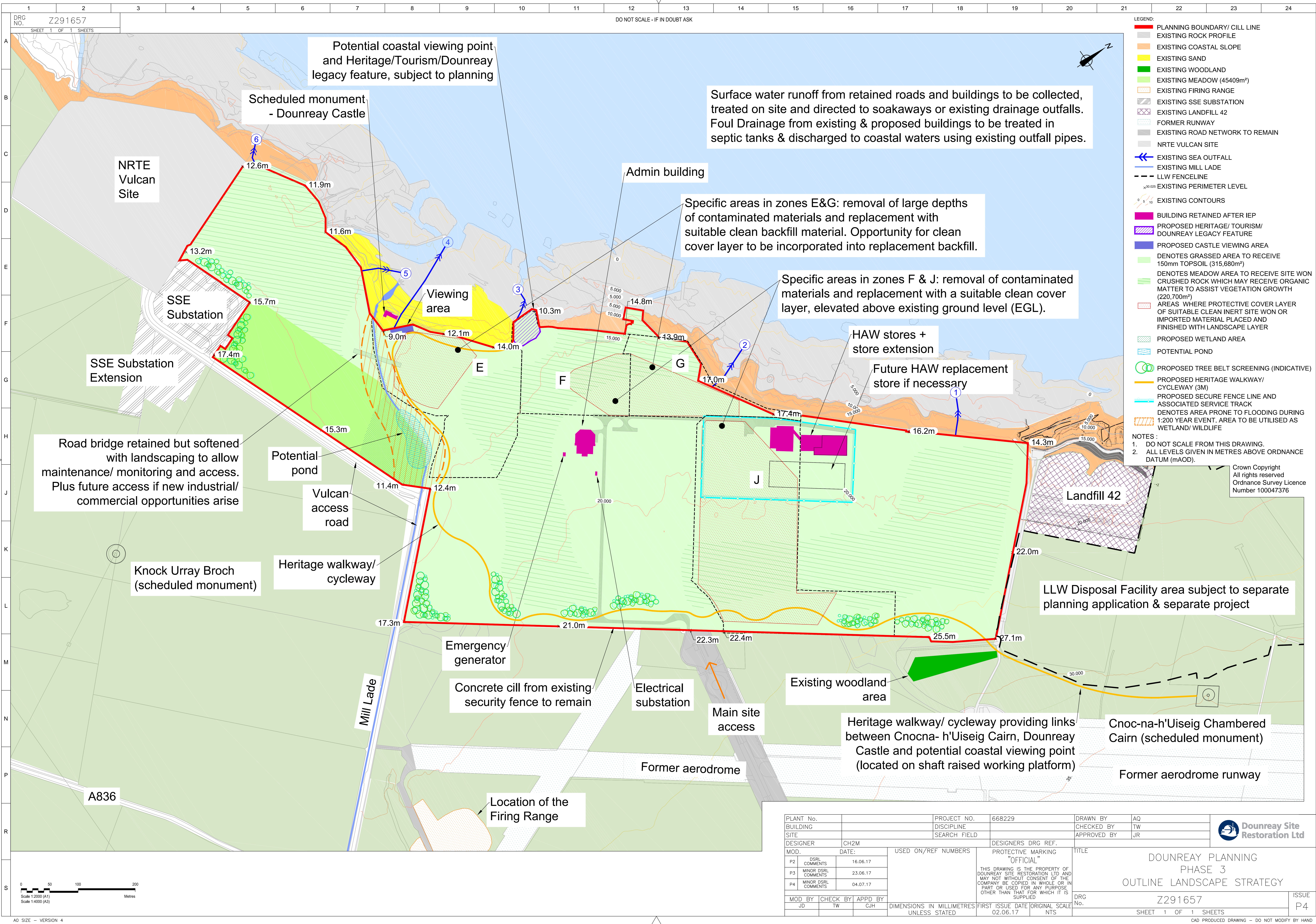
DO NOT SCALE - IF IN DOUBT ASK



LONG SECTION  
MOBILE WASTE RETRIEVAL BUILDING  
(SHOWN OVER WIDEST PIT)



PLANT NO.		PROJECT NO.	L1083_1081_03	DRAWN BY	SG MCGREGOR	
BUILDING	MWRB	DISCIPLINE		CHECKED BY	M HITCHIN	
SITE	DOUNREAY	SEARCH FIELD	CHANGE	APPROVED BY	M HITCHIN	
DESIGNER	DSRL	DESIGNERS DRG REF.				
MOD.	DATE:	USED ON/REF NUMBERS	1Z301847 CROSS SECTION	PROTECTIVE MARKING	TITLE CONCEPT LONG SECTION MOBILE WASTE RETRIEVAL BUILDING	
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MOD BY	CHECK BY	APPD BY	DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE	ORIGINAL SCALE 1:100	



Potential coastal viewing point and Heritage/Tourism/Dounreay legacy feature, subject to planning

Scheduled monument - Dounreay Castle

Surface water runoff from retained roads and buildings to be collected, treated on site and directed to soakaways or existing drainage outfalls. Foul Drainage from existing & proposed buildings to be treated in septic tanks & discharged to coastal waters using existing outfall pipes.

Specific areas in zones E&G: removal of large depths of contaminated materials and replacement with suitable clean backfill material. Opportunity for clean cover layer to be incorporated into replacement backfill.

Specific areas in zones F & J: removal of contaminated materials and replacement with a suitable clean cover layer, elevated above existing ground level (EGL).

Road bridge retained but softened with landscaping to allow maintenance/ monitoring and access. Plus future access if new industrial/commercial opportunities arise

LLW Disposal Facility area subject to separate planning application & separate project

Heritage walkway/ cycleway providing links between Cnocna- h'Uiseig Cairn, Dounreay Castle and potential coastal viewing point (located on shaft raised working platform)

Cnoc-na-h'Uiseig Chambered Cairn (scheduled monument)

Former aerodrome runway

- LEGEND:**
- PLANNING BOUNDARY/ CILL LINE
  - EXISTING ROCK PROFILE
  - EXISTING COASTAL SLOPE
  - EXISTING SAND
  - EXISTING WOODLAND
  - EXISTING MEADOW (45409m<sup>2</sup>)
  - EXISTING FIRING RANGE
  - EXISTING SSE SUBSTATION
  - EXISTING LANDFILL 42
  - FORMER RUNWAY
  - EXISTING ROAD NETWORK TO REMAIN
  - NRTE VULCAN SITE
  - ← EXISTING SEA OUTFALL
  - EXISTING MILL LADE
  - LLW FENCELINE
  - x EXISTING PERIMETER LEVEL
  - o EXISTING CONTOURS
  - BUILDING RETAINED AFTER IEP
  - PROPOSED HERITAGE/ TOURISM/ DOUNREAY LEGACY FEATURE
  - PROPOSED CASTLE VIEWING AREA
  - DENOTES GRASSED AREA TO RECEIVE 150mm TOPSOIL (315,680m<sup>2</sup>)
  - DENOTES MEADOW AREA TO RECEIVE SITE WON CRUSHED ROCK WHICH MAY RECEIVE ORGANIC MATTER TO ASSIST VEGETATION GROWTH (220,700m<sup>2</sup>)
  - AREAS WHERE PROTECTIVE COVER LAYER OF SUITABLE CLEAN INERT SITE WON OR IMPORTED MATERIAL PLACED AND FINISHED WITH LANDSCAPE LAYER
  - PROPOSED WETLAND AREA
  - POTENTIAL POND
  - o PROPOSED TREE BELT SCREENING (INDICATIVE)
  - PROPOSED HERITAGE WALKWAY/ CYCLEWAY (3M)
  - PROPOSED SECURE FENCE LINE AND ASSOCIATED SERVICE TRACK
  - DENOTES AREA PRONE TO FLOODING DURING 1:200 YEAR EVENT. AREA TO BE UTILISED AS WETLAND/ WILDLIFE

**NOTES:**  
 1. DO NOT SCALE FROM THIS DRAWING.  
 2. ALL LEVELS GIVEN IN METRES ABOVE ORDNANCE DATUM (mAOD).

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PLANT No.		PROJECT NO. 668229		DRAWN BY AQ	
BUILDING		DISCIPLINE		CHECKED BY TW	
SITE		SEARCH FIELD		APPROVED BY JR	
DESIGNER CH2M	DATE:	USED ON/REF NUMBERS	DESIGNERS DRG REF.	PROTECTIVE MARKING "OFFICIAL"	
P2 DSRL COMMENTS	16.06.17			THIS DRAWING IS THE PROPERTY OF DOUNREAY SITE RESTORATION LTD AND MAY NOT WITHOUT CONSENT OF THE COMPANY BE COPIED IN WHOLE OR IN PART OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED	
P3 MINOR DSRL COMMENTS	23.06.17				
P4 MINOR DSRL COMMENTS	04.07.17				
MOD BY JD	CHECK BY TW	APPD BY CJH	DIMENSIONS IN MILLIMETRES UNLESS STATED	FIRST ISSUE DATE 02.06.17	ORIGINAL SCALE NTS
			TITLE		DRG No.
			DOUNREAY PLANNING PHASE 3 OUTLINE LANDSCAPE STRATEGY		Z291657
					SHEET 1 OF 1 SHEETS
					ISSUE P4

