Transport Statement

Drum Farm Energy Storage Project

Ref	04872-3704704

Revision History

Issue	Date	Name	Latest changes
01	08/03/2022	Milo Amsbury-Savage	First Created

Contents

1 Introduction

This Transport Statement has been prepared to support the development of the Drum Farm Energy Storage Project. Its principal objective is to provide details of the proposed transport management arrangements during the construction of the project and to provide details of transport movements during construction and operation of the project.

1.1 Description of the Site

The Drum Farm Energy Storage Facility comprises 36 battery containers, associated PCSs and transformers, a 33kV substation building and ancillary plant and infrastructure on land at Drum Farm, Keith, AB55 5NP.

During construction, temporary construction facilities will include a site office, welfare areas, parking and storage areas for plant and materials.

2 Transport Route

2.1 Description of the Route to Site

It is proposed that all equipment deliveries shall take the following route to site:

- Head east from the A96 onto Drum Road.
- From Drum Road, travel approximately 0.8km, then head south onto the existing core path, which measures approx. 3-4m wide and is approximately 300m in length, to enter the site.

In the event of any road closures on the delivery route, all vehicles will follow the designated diversion route.

2.2 Strategic Road Network Assessment

2.2.1 A96(M)

The A96 Is a major road in the north of Scotland, running generally west/north-west from Aberdeen, and terminating at the A9 outside Inverness. It starts as a dual carriageway until Inverurie, where it becomes a single carriage for most of the way until it meets the A9 in Inverness. The A96 through Keith has been utilised as the transport route for similar developments to this proposal and is therefore capable of supporting the delivery of similar infrastructure.

2.2.2 Drum Road

Drum Road is an asphalt covered road running west-east from the A96. Toward the end of the road, it turns south and terminates at a farm/residential building. Drum Road passes by the rear entrance to the grounds of a school and passes a residential area with cars parked on both side of the road, Here it decreases in width to approximately 3.0m (measured using an aerial photograph). Use of this stretch may require cooperation with the school/residents and traffic management during times of peak deliveries.

Drum Road serves Drum Farm and is therefore suitable for large agricultural vehicles. At Moray Council's request, two permanent passing places will be installed along Drum Road between the existing core path and the playing field to the west.

2.2.3 Core Path

The existing core path comprises a grassed track approximately 3-4m wide (measured from topographical survey) flanked either side by ditches approx. 2.6-2.8m wide. Fences run along the edge of both ditches, parallel to the path. This path will be upgraded as part of initial works, including the construction of a new asphalt junction with Drum Road, a new unbound granular track, and upgrading of existing ditches either side of the core path to shallow filter drains.

Use of the core path as the main site entrance has been requested by Moray Council during pre-application consultation in order to avoid a new access track, running parallel to the existing path, being created.

Figure 1 – A96 heading north through Keith

Figure 2 – Drum Road heading east, showing path narrowing outside school rear entrance

Figure 3 – Existing core path heading south from Drum Road to the site

3 Construction Traffic

3.1 Delivery Vehicles

3.1.1 Civil Engineering Construction

On site hardstanding areas, tracks and equipment foundations shall be constructed using stone and concrete. The majority of deliveries at this stage will use tipper lorries, concrete trucks and flatbed trucks. Plant required for the works will also be delivered on low loaders or other suitable transportation vehicles.

3.1.2 Large Component Deliveries

These components shall be delivered using articulated lorries. Associated goods such as smaller components, tools and other equipment will be delivered on flatbed trucks and low loaders. The majority of deliveries will fall under the UK Standard Vehicle Regulations.

Abnormal load vehicles under the Special Types General Order (STGO) may also be required for delivery of larger components. Should the need for a STGO vehicle(s) be identified during the development of the final delivery solution, the route will be fully assessed, and suitable measures implemented e.g. the use of escort vehicles, as required by law.

3.1.3 Miscellaneous Equipment

Electrical and communications cables, fencing panels, drainage materials and other such miscellaneous materials will be delivered to site on flatbed trucks or low loaders. Occasional deliveries of small packages will also take place with vans and other light goods vehicles.

Site offices, welfare facilities and equipment storage containers will be delivered on flatbeds and low loaders and will be maintained on an ad-hoc basis.

Regular deliveries of fuel and water for the site plant will be made using a mini tanker and removal of chemical toilet waste will be made using a mini tanker.

3.1.4 Staff/Workforce

The daily commute of workers in cars, vans and small trucks will form a large proportion of the site traffic. However, the chosen Contractor will encourage all sub-contractors, labourers and tradesmen to car/van share for their journeys to and from the site to reduce the number of vehicle movements involved. Parking for the workforce will be fully accommodated on site. Parking on, or near to, the adopted highway will not be required.

3.2 Vehicle Movements

Throughout the construction phase there will be a combination of HGVs (for the component and material deliveries) and cars/vans (for construction staff), on site. HGV movements are expected to be most intense throughout the first few weeks of construction whilst car/van movements are expected to be constant throughout. The table below shows the estimated number of deliveries and movements for the main infrastructure.

Vehicle movement	Estimate total return trips over twelve-month construction period	Indicative spread of vehicle movements during construction phase
Site Welfare Setup	10	Month 1
Tipper truck (stone delivery)	600	Months 1 - 3
Onsite battery containers, PCS and transformer units delivery.	80	Months 4 - 9
Battery delivery	75	Months 6 - 9
Electrical equipment delivery	20	Months 6 - 9
Substation equipment delivery	5	Months 6 - 9
Cable delivery	20	Months 6 - 10
Concrete delivery	30	Months 3 - 5
Duct / cable ladder delivery	40	Months 3 - 6
Temporary Fence delivery	30	Month 1
Permanent Fence delivery	30	Month 10
Spares container delivery	1	Month 10
Construction personnel	4680	Months 1 - 12

Table 1 – Guideline Vehicle Movement Numbers and Timing

Vehicle movements can vary depending on site conditions, programming, weather restrictions, etc., and therefore these numbers should be treated as a guideline only.

The expected HGV volumes are based on best estimates of trips generated for similar sized battery storage facilities and will be subject to amendments based on local conditions, working practices and timing of works.

It is proposed that temporary signage would be used to highlight the entrance to the site and to direct construction traffic to the site via the local and regional roads.

Sufficient time will be provided between deliveries to allow for any delays (such as loading / unloading taking longer than expected) and to avoid any vehicles waiting.

3.3 Passing Places

During pre-application consultation with Moray Council, the Council's Transport Officer requested the following:

'As there is currently no formal passing place provision on the rural section of this road, Roads Maintenance would also recommend that the provision of at least two additional large vehicle standard passing places be provided between the outskirts of Keith as a planning condition. In our opinion one should be located at or near the kink in the single-track road and the second roughly halfway between the kink and the new access'

As per the Transport Officer's request, RES shall design permanent passing places along the single track (Drum Farm), at the kink in the road, with the second access place roughly half-way between the kink the in road and the beginning of the access track, where there is a natural passing place already. These will be designed in accordance with the Moray Council Passing place document, referenced in Appendix A.

These passing places are likely to be requested by a planning condition and will be agreed via a Highways Agreement.

3.4 Timing Restrictions

It is anticipated that all traffic movements will be carried out between 08.00 to 18.00 on Monday to Friday and 08.00 to 13.00 on Saturdays and at no time on Sundays or Bank or National Holidays unless otherwise agreed in advance with Moray Council.

3.5 Programme of Works

The programme of works is anticipated to take place over approximately a 12-month period. An initial indication of the programme of works is provided below.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Setup site welfare												
Construct site entrance												
Construct site tracks and hardstandings												
Construct drainage works												
Construct foundations												
Install battery enclosures												
Install batteries and PCSs												
Onsite cable works												
Substation installation												
Grid connection works												
Energisation												
Commissioning												
Testing												
Handover												

Table 2 – Indicative Programme of Works

4 Construction Activity

4.1 Site Access and Entrance Work

The existing core path, running from Drum Road to site, will be upgraded as part of initial works. These works will include construction of a new asphalt junction with Drum Road, a new unbound granular track, and upgrading of existing ditches either side of the core path to shallow filter drains. A short stretch of the ditch that runs along the field boundary at the proposed access point will also be filled in as part of the proposed works.

Two passing places will be installed as per Moray Council's specification along Drum Road between the core path and the playing field to the west.

4.2 Construction Working Areas

During construction, a temporary construction working area will be set up for construction works and temporary facilities. The temporary facilities will include site offices, welfare areas, parking, a turning area for vehicles, and storage areas for plant and materials. The construction working area will be located within the site boundary. Once construction of the site is completed, all portacabins, machinery and equipment will be removed from site.

Vehicles will drive into the site forwards, turn around on site and exit forwards. Measures shall be in place to manage the timing of the delivery of material and plant to the site; if the site has insufficient space to accommodate a delivery (e.g., due to an ongoing delivery or obstructive site works), the delivery vehicle will be instructed to wait in a safe location, remote from site if necessary, until suitable space is available.

4.3 Mud Prevention Measures

During the works, measures shall be in place to ensure that mud and debris is not spread onto the adjacent public highway. The public highway will be regularly inspected, and any deposited debris or mud will be dealt with immediately by means of a road sweeper.

4.4 Pollution Control

Best practice measures will be implemented to minimise pollution due to construction. These measures are detailed in the Construction Environmental Management Plan (CEMP) which forms a separate document to this.

4.5 Emergency Services

The Police, Fire and Ambulance service will be given written notice of the construction works and invited to site for an additional briefing.

4.6 Local Services

RES will make every reasonable effort to ensure that there is no disruption to local services e.g., bin collections and school buses.

5 Operational Activity

5.1 Routine Operational Phase Traffic

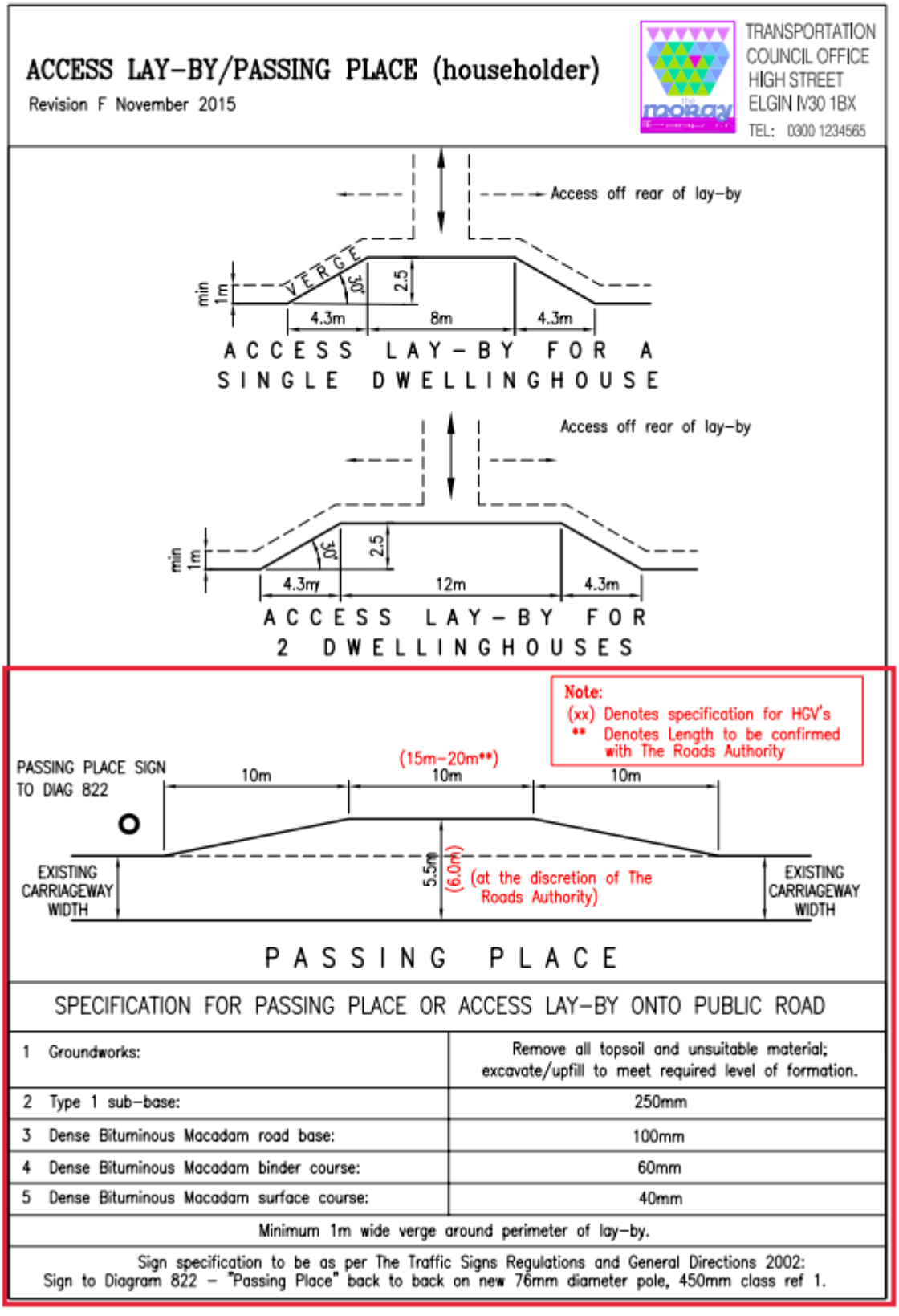
Once operational, the facility will be remotely controlled and as such will be unmanned. There will however be a visit to the site approximately once a month by a car, van or light goods vehicle, to carry out regular inspections and route maintenance. Parking for these visits will be accommodated on site.

5.2 Non-Routine Operational Phase Traffic

It is possible that one or more medium or large components may require replacement during the operational life of the facility. The nature of the traffic associated with such works will be similar to that used in the construction phase of the project but will be present for a much shorter duration. Should the scale of the works be such that traffic management measures would be required to manage vehicle movements to and from the site, the necessary permissions shall be sought from the local authority in line with due process.

Appendix A

Access Lay-By/Passing Place recommendation by Moray Council



SPECIFICATION FOR PASSING PLACE OR ACCESS LAY-BY ONTO PUBLIC ROAD

1 Groundworks:	Remove all topsoil and unsuitable material; excavate/upfill to meet required level of formation.
2 Type 1 sub-base:	250mm
3 Dense Bituminous Macadam road base:	100mm
4 Dense Bituminous Macadam binder course:	60mm
5 Dense Bituminous Macadam surface course:	40mm
Minimum 1m wide verge around perimeter of lay-by.	
Sign specification to be as per The Traffic Signs Regulations and General Directions 2002: Sign to Diagram 822 – "Passing Place" back to back on new 76mm diameter pole, 450mm class ref 1.	