Chapter 9
Cultural Heritage

Introduction

9.1 This chapter presents the findings of the assessment of likely significant effects of the proposed EDM Project (as described in **Chapter 4: Project Description**) on cultural heritage. Cultural heritage is held to be '*the physical evidence for human activity that connects people with place, linked with the associations we can see, feel and understand*'[i]. It comprises tangible, physical assets including: historic buildings and structures; archaeological assets; the remains of past environments shaped by human action; gardens and designed landscapes; historic landscapes and townscapes; and, other sites, features or places in the landscape that have the potential to provide information on past human activity. It also incorporates less tangible associations of place with events, such as historical battlefields, or with historical figures and folklore.

9.2 Effects on the cultural value (herein used to refer to 'cultural significance' to avoid confusion with the discussion of the significance of effects) of both above and below ground heritage assets are considered as a result of either direct physical or setting change.[1] These include designated assets (World Heritage Sites (WHS), Listed Buildings, Scheduled Monuments, Gardens Designed Landscapes and Battlefields on the Inventory, and Conservation Areas) as well as non-designated assets. The chapter includes an overview of the legislative and guidance framework for cultural heritage, sets out the assessment methodology, including the parameters for data collation and the criteria by which receptor value, magnitude of change and significance of effect are established. The current baseline conditions of the EDM Project area and its surroundings are then set out before the likely significant environmental effects are assessed and mitigation measures required to prevent, reduce or offset any significant negative effects delineated. Finally, the likely residual effects that would remain after these measures have been employed are assessed.

9.3 The cultural heritage assessment was undertaken by LUC.

9.4 The chapter should be read in conjunction with the following:

- **Chapter 4: Project Description**
- **Chapter 5: Planning Policy Context**
- **Chapter 6: Landscape and Visual Impact Assessment**
- **Appendix 9.1: Contextual information and gazetteers**
- **Appendix 9.2. Designated assets wireline visualisations and plates**
- **Appendix 9.3 Non-designated asset assessment tables and plates and figures**

Scope of the Assessment

Effects assessed in Full

9.5 The assessment covers effects arising from the construction and operation of the New 132kV single-circuit wood pole overhead line (New 132kV OHL), and the decommissioning of the Existing 132kV double-circuit steel tower line (Existing 132kV OHL). The following effects have been assessed in full.

- Direct physical effects during construction of the New 132kV OHL on cultural heritage;
- Direct setting effects during operation of the New 132kV OHL on cultural heritage; and
- Direct physical and setting effects on cultural heritage, during the decommissioning of the Existing 132kV OHL.

Effects Scoped Out

9.6 On the basis of the desk based and field survey work undertaken, the professional judgement of the EIA team, policy, guidance, and standards, and feedback received from consultees, the following potential effects have been 'scoped out' of detailed assessment:

- Direct setting effects during construction of the New 132kV OHL (since these will be temporary);
- Direct physical effects during operation on cultural heritage (since there will be no such effects following construction); and,
- Inter-relationship effects between environmental topics i.e. indirect physical effects on sites or features of national, regional or local cultural heritage value as a consequence of vibration, dewatering or changes in hydrology (since such effects are unlikely, and will definitely not be significant, given the scale and nature of the development).
- Cumulative (inter-project) effects (since no assets have been identified as experiencing either physical or setting effects from both the construction and operation of the New 132kV OHL and other proposed developments (comprising Cairn Curran and Inverclyde windfarms).

Assessment Methodology

Legislation, Policy and Guidance

Legislation

9.7 This assessment is carried out in accordance with the principles contained within the following legislation:

- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997, (as amended);
- Ancient Monuments and Archaeological Areas Act 1979, (as amended); and
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

Policy

9.8 This assessment is carried out in accordance with the principles set out in:

- Historic Environment Scotland (2019) 'Historic Environment Policy for Scotland' (HEPS); and
- Historic Environment Scotland (2019) 'Designation Policy and Selection Guidance' (DPSG).

Guidance

9.9 This assessment method and approach has regard to:

- Scottish Government (2014) 'Our Place in Time: The Historic Environment Strategy for Scotland';
- Scottish Government (2011) 'Planning Advice Note 2/2011: Planning and archaeology';
- Historic Environment Scotland and Scottish Natural Heritage (2018) 'Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland'[2];
- Historic Environment Scotland (2016) 'Managing Change in the Historic Environment Guidance Notes – Setting';
- The Chartered Institute for Archaeologists (2017) 'Standard and guidance for historic environment desk-based assessment'; and,
- The Chartered Institute for Archaeologists (2014) 'Code of Conduct'.

[1] All effects to heritage assets are considered in relation to their heritage value (significance) and are therefore considered to be direct.

[2] This guidance has been followed only where appropriate as it contains some methodological issues in relation to cultural heritage. In this regard, its criteria conflate heritage asset 'value' with 'sensitivity' meaning that the contribution of setting cannot be properly considered.

Consultation

9.10 In undertaking the assessment, consideration has been given to the scoping responses and other consultation as undertaken as detailed in **Table 9.1**.

Table 9.1: Consultation

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Historic Environment Scotland (HES), March 2018	Pre-application routeing consultation	Advised that attention be given to the setting of the nationally important assets closest to the line: **Scheduled monuments:** - Whitemoss Roman fort (Index no. 1652); - Bishopton, aqueduct NW of (Index no. 4326); - No. 4 Ritchieston, enclosure 285m ENE of (Index no. 12807); and - Craigmarloch Hill fort (Index no. 4379) **Inventory gardens and designed landscapes:** - Formakin Further advised consultation with Inverclyde Council's Archaeological Service.	The production of selected visualisations to illustrate matters related to change in the setting of heritage assets was undertaken to inform the assessment of setting change.
West of Scotland Archaeology Service February 2018 (representing Renfrewshire Council; Inverclyde is not represented by WOSAS and no longer has a historic environment contact)	Pre-application routeing consultation	No response received.	N/A
HES, January 2019	Formal scoping consultation	Confirmed that they were content that the relevant consideration for their interests had been identified. Advised that potential effects on the Scheduled Whitemoss Roman Fort will require further discussion prior to the submission of scheduled monument consent (SMC)	Further consultation will be undertaken with HES in relation to SMC post-application.
West of Scotland Archaeology Service December 2018 (representing Renfrewshire Council; Inverclyde is not represented by WOSAS and no longer has a historic environment contact)	Formal scoping consultation	No response received.	N/A
HES	Other consultation	In discussion with SPEN, it was determined that dealing with SMC as a condition on the eventual section 37 consent was the favoured approach.	A separate SMC application will be prepared and submitted to HES to discharge this condition in due course.

9.11 As a follow up to **Table 9.1**, it was intended that the visualisations for Ritchieston Enclosure and Formakin GDL be photomontages and the rest wirelines; however, due to the Covid-19 pandemic and subsequent restrictions of movement, visits for photography were not possible and the photomontages could not be completed. Instead, wirelines have been produced.

Study Area

9.12 A 3km radius Study Area has been defined rom the New 132kV OHL based on the potential for significant effects arising from setting change to heritage assets. This Study Area has been informed by a Zone of Theoretical Visibility (ZTV) created using digital terrain data[3] (the same as that in the landscape and visual assessment – see **Figure 6.1.2**) which has indicated that at greater distances[4] setting effects are unlikely given to the scale of the project, with the New 132kV OHL having an average height of 15m. However, assets of high value (e.g. designated assets) beyond 3km were considered to establish the scope of assessment. Within the 3km Study Area a second inner Study Area of 200m has been defined around all infrastructure components of the EDM Project in order to assess the potential for physical effects to cultural heritage assets.

9.13 The contextual information for the Study Area can be found in **Appendix 9.1.**

Desk Based Research and Data Sources

9.14 The following data sources have informed the assessment:

- West of Scotland Archaeology Service (WoSAS) Historic Environment Record (HER)[5];
- Inverclyde Council archaeological sites index[ii];
- Historic Environment Scotland (HES) designated asset GIS data[iii] and online catalogue[iv];
- National Record of the Historic Environment (HES 'Canmore' database)[v];
- Local authority websites for conservation areas designations[vi];

[3] The ZTV does not include tree or building heights and therefore indicates a greater level of visibility than is actually possible.
[4] It should be noted that at the routeing stage, a 5km radius study area was originally defined around the route options to ensure that the potential for setting change to sensitive assets – most notably the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site – could be appropriately understood. In addition, assets within the Zone of Theoretical Visibility (ZTV) model developed for the parallel Landscape and Visual Impact Assessment (LVIA) was used to confirm the potential for effects on assets with potential sensitivity to setting change at greater distances. However, in common with the LVIA, this was reduced as effects are judged to be unlikely due to the scale of the project.
[5] Covering Renfrewshire.

- HLAmap data[vii] for information on historic landscapes;
- The Scottish Palaeoecological Archive Database[viii];
- Ordnance Survey maps (principally 1st and 2nd Editions) and other published historic maps held in the Map Library of the National Library of Scotland[ix];
- Aerial Photographs – HES National Collection of Aerial Photography (NCAP) holdings (oblique, vertical) and Google Earth™ and Scottish Government/Scottish Environment Protection Agency LiDAR data; and
- Available grey literature and published sources relating to the cultural heritage of the area, including the Scottish Archaeological Research Framework (SCARF) panel reports[x].

Historic landscapes

9.15 The HLAmap data was reviewed for information on historic landscapes within the inner Study Area. The majority was classified as 18th century rectilinear fields and farms, with some later amalgamation. Other landscape types include rough grazing, golf courses, managed woodland, plantation, planned rectilinear fields and farms and a designed landscape. The only landscape type to be considered sensitive to change as a result of the EDM Project is the designed landscape at Formakin, which is also on the Inventory of Designed Gardens and Landscapes and has accordingly been scoped into the assessment.

Historic map regression

9.16 A review of readily available historic mapping has been reviewed to identify assets that might be physically effected by the EDM Project. Three archaeological assets were identified as intersecting with works relating to the New 132k OHL; no assets were identified as intersecting with the Existing 132kV OHL. For reference purposes the assets identified through the historic map regression have been given reference numbers pre-fixed with the letters HMA (e.g. HMA1 – HMA3).

LiDAR data

9.17 For the 200m inner Study Area, 1m digital surface model (DSM) LiDAR data was obtained from the Scottish Remote Sensing Portal.[xi] This data covered only the western half of the scheme from Devol Moor to Park Glen; no data was available further east than this. No new heritage assets that are affected by the EDM Project were identified.

Aerial Photo review

9.18 A review of aerial images in the National Collection of Aerial Photography (NCAP) was undertaken in May 2018. The area reviewed comprised the inner Study Area; no new features were identified.

The Scottish Palaeoecological Archive Database

9.19 The Scottish Palaeoecological Archive Database was accessed in November 2019. No site records were returned within the inner Study Area, and only four were identified in the outer Study Area (West Fulwood 814; Fulwood Moss 636; Barochan Moss 635; and Greenock 844).

Field Survey

9.20 To inform the assessment a Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) Level 1 Field Survey was conducted of the 200m wide Study Area in June 2018. Field survey was undertaken to:

- locate all visible cultural heritage assets, both identified during the desk-based assessment and previously unrecognised, and record their character, extent and current condition.
- identify areas with the potential to contain unrecorded, buried archaeological remains, taking into account factors such as topography, geomorphology and ground conditions to inform the assessment of the possible direct effects of the project on these features.

9.21 The survey also included visits to key cultural heritage assets within the 3km wider Study Area, to assess whether the New 132kV OHL could affect their value (significance), as a result of setting change. Key cultural heritage assets were considered to be those most likely to receive appreciable effects on their settings (i.e. those closest to the route with potential intervisibility, those of highest value (significance) and sensitive to change, and/or those specifically identified as requiring assessment by consultees.

9.22 A total of 16 previously-unrecognised archaeological assets were recorded; for reference these have been assigned identification numbers prefixed with WOA (e.g. WOA1 – WOA18).[6]

Cultural Heritage Viewpoints

9.23 Five viewpoints were identified for cultural heritage assets within the 3km Study Area considered to be potentially sensitive to changes to their heritage value (significance) as a result of setting change via the EDM Project. These cultural heritage assets were identified through consultation with HES (**Table 9.1**) and during site visits. They are summarised in **Table 9.2** below and the wireline visualisations are presented in **Appendix 9.2**.

Table 9.2: Cultural heritage viewpoints

No	Asset Name	Asset No	Designation	Approx. Distance from the 132kV OHL
CH1	Whitemoss Roman Fort	SM1652	Scheduled Monument	560m (Existing line to be decommissioned bisects asset, with two tower bases in place within Scheduled area)
CH2	Bishopton aqueduct	SM4326	Scheduled Monument	90m
CH3	No. 4 Ritchieston, enclosure	SM12807	Scheduled Monument	100m
CH4	Craigmarloch Wood, fort	SM4379	Scheduled Monument	210m
CH5	Formakin	GDL00183	Inventory-listed Garden and Designed Landscape	560m *Indicative VP location*

9.24 Further explanation of the methodology used in generating these visualisations is included within **Appendix 6.1**.

Assessment

Receptor value

9.25 As set out above, cultural heritage policy and guidance require the assessment of 'cultural significance' the sum of an assets heritage interests or characteristics. However, in EIA the term 'significance' is used in determining the measure/ level of effects. Accepted EIA alternatives to cultural 'significance' include 'value', 'importance', or 'sensitivity'. To avoid confusion, cultural significance is herein discussed as cultural or heritage 'value', which is separate to an assets 'sensitivity' to change (discussed below).

9.26 HES's (2019) guidance[xii] defines cultural value (significance) as: 'aesthetic, historic, scientific or social value for past, present or future generations. Cultural significance can be embodied in a place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.' However, there is no further guidance for assessment of these criteria. Therefore, the value of cultural heritage assets has been determined in accordance with HES's DPSG (2019)[xiii] and setting guidance.[xiv] The DPSG guidance is intended to assist HES in identifying assets that are of national importance, nevertheless the method of assessing cultural value provides a useful framework that may be applied to all heritage assets. The value of Scheduled Monuments – which is equally applicable to archaeological assets - is considered against three key criteria:

1. Intrinsic characteristics – how the physical remains of a site or place contribute to our knowledge of the past.
2. Contextual characteristics – how a site or place relates to its surroundings and/or to our existing knowledge of the past.
3. Associative characteristics – how a site or place relates to people, practices, events and/or historic and social movements.

[6] The numbering is not sequential hence the difference in numbering and total number of assets.

9.27 It should be noted that in the case of Scheduled Monuments/ archaeology there is some overlap between the criteria for contextual characteristics and setting.

9.28 Listed buildings – and equally non-designated built heritage assets - are assessed for their architectural and historical interest, and the contribution of setting to that interest. Architectural interest includes: design, designer, materials, setting and the extent to which these characteristics survive, while historic interest includes age, rarity, social historical interest and associations with people or events that have had a significant effect on Scotland's cultural heritage.

9.29 The criteria for garden and designed landscapes, which may also be applied to non-designated landscapes, fall under seven headings:

1. Artistic interest;
2. Historical interest;
3. Horticultural interest;
4. Architectural interest;
5. Archaeological interest;
6. Scenic interest; and
7. Nature conservation interest.

9.30 The level of receptor value is supported by a textual description of the sum of its heritage interests/ characteristics, articulated in accordance with DPGS (2019)[xv] It should be noted that not all heritage assets will possess each of the above heritage interests/ characteristics and that lacking a category of interest/ characteristic (e.g. artistic interest) does not mean it is of a lesser heritage value. **Table 9.3** summarises the criteria for determining the value of cultural heritage assets used in this assessment, and a discussion of the underlying interests/ characteristics of each assessed asset is set out in relation to designated assets in this chapter and in relation to non-designated assets in **Appendix 9.3**.

Table 9.3: Heritage asset value criteria

Value	Criteria
High	Designated cultural heritage assets Non-designated cultural heritage assets that meet the criteria for statutory designation
Medium	Non-designated heritage assets of regional value
Low	Non-designated cultural heritage assets of local value
Very low	Non-designated cultural heritage assets of less than local value
Uncertain	The heritage value of the asset could not be fully ascertained

9.31 While the value of heritage assets remains constant, their sensitivity varies depending on what values underpin their cultural value and the way in which the EDM Project interacts with them. All cultural heritage assets that the EDM Project interacts with will be highly sensitive to physical change, but where physical effects are not likely an asset may still be highly sensitive to change if its setting contributes to its cultural value, or the ability to appreciate that value. For this reason, a clear narrative explanation of the heritage asset's sensitivity to the EDM Project, based on the level of contribution made by setting to an asset's value, is included in the assessment. A rating for sensitivity has also been provided based on this narrative and professional judgement, using the criteria in **Table 9.4** below.

Table 9.4: Criteria for sensitivity to setting change

Sensitivity	Criteria
High	The asset has a setting that makes a major contribution to its cultural value
Medium	The asset has a setting that makes a moderate contribution to its cultural value
Low	The asset has a setting that makes a limited contribution to its cultural value
Uncertain	Understanding of the asset's cultural value is uncertain meaning that the contribution made by setting is unknown
None	The asset's setting does not contribute to its cultural value

9.32 In accordance with HES guidance (2016)[xvi] 'setting' is defined as '*the way the surroundings of a historic asset or place contribute to how it is understood, appreciated and experienced*'. HES guidance on setting (2019)[xvii] sets out a three-stage approach to assessing the impact of a development on the setting of a historic asset:

- **Stage 1:** identify the historic assets that might be affected by the proposed development;
- **Stage 2:** define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and
- **Stage 3**: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative effects can be mitigated.

9.33 The results of Stage 1 and Stage 2 for designated assets is presented in full in this chapter; all baseline data and assessment relating to non-designated assets is included in **Appendix 9.3**. Stage 3 is informed by a review of the interaction between the cultural heritage assets and proposed EDM Project and is reported in the 'Assessment of Effects' section below and in **Appendix 9.3**. Appropriate mitigation and enhancement measures to address effects to cultural heritage assets are described in the section on 'Proposed Mitigation'.

Magnitude of change

9.34 The magnitude of change affecting the heritage assets as a result of the EDM Project has been assessed using professional judgement and the criteria set out in **Table 9.5** below.

Table 9.5: Magnitude of change

Magnitude of change	Description
High	Total or near total loss of a heritage asset's cultural value either through physical and/ or setting change
Medium	Substantial loss or alteration of a heritage asset's cultural value either through physical and/ or setting change
Low	Slight loss or alteration of a heritage asset's cultural value either through physical and/ or setting change
Negligible	A very slight or barely perceptible loss or alteration of a heritage asset's cultural value either through physical and/ or setting change
None	No change to the cultural value of the heritage asset

Significance of effect

9.35 The significance of effect is determined with reference to a range of factors, including:

- The asset's value (cultural value);
- The asset's sensitivity to the proposed change (physical change / setting change); and
- The degree of change in its cultural value resulting from the proposal (magnitude of change).

9.36 Significance of effect in EIA terms is measured according to the criteria in **Table 9.6** below. **Major** and **moderate** effects are considered significant in the context of the EIA Regulations.

Table 9.6:Significance of effect criteria

Significance of effect	Description
Major	Total or near total loss of the cultural value of a heritage asset of medium or high value
Moderate	Substantial loss or alteration of a medium or high value heritage asset's cultural value; or total or near total loss of an asset of low value
Minor	Slight loss or alteration of the cultural value of a heritage asset of medium or high value; slight to substantial loss or alteration of the cultural value of an asset of low value; or slight to total loss or alteration of an asset of very low value
None	No change, or very slight/barely perceptible change to the cultural value of a heritage asset

Assessment Limitations

9.37 As outlined above, data from a range of sources has been used in this assessment and, unless otherwise stated, it is assumed that this is accurate.

9.38 The WoSAS and Inverclyde HERs are a record of the discovery of a wide range of cultural heritage assets. They do not constitute a complete record of all aspects of the historic environment and the discovery of further, presently unknown, buried archaeological assets is possible.

9.39 The Inverclyde HER data was requested from Inverclyde Council at routeing stage and again at reporting stage, but no response was received on either occasion. Consequently, the index of archaeological sites made available on the Council website were downloaded and spatially referenced; this data does not include any descriptive information. Where possible, this information has therefore been cross-referenced with other sources.

9.40 LiDAR data[xviii] is only available for the western extent of the EDM Project and Study Area – as far as Park Erskine - and does not cover the eastern end of the route.

9.41 Where access was difficult or denied during the site visit, publicly accessible locations as close as possible to the asset were visited.

9.42 Whilst some information gaps have been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on cultural heritage.

Existing Conditions

9.43 The EDM Project is located on the south side of the Firth of Clyde, in an area that has been extensively used, occupied and modified by human communities since early prehistory. The Study Area is broadly typical of the historic environment of rural central Scotland. Its upland areas, dominated by moorland and plantation woodland, feature sparse distributions of upstanding archaeological assets, most notably later prehistoric enclosure/ fort sites. The more rolling agricultural landscapes of the Study Area are focused around a number of historic estate centres, and extensive designed landscapes including Formakin House and Erskine Park.

9.44 The strategic importance of the Firth of Clyde is underlined within the Study Area through assets from a range of periods, most notably the long sequence of defensive sites on Dumbarton Rock, Roman military installations, including elements of the Antonine frontier system, and extensive World War Two military remains and bomb craters.

9.45 Table 9.7 below summarises the number of heritage assets identified within both Study Areas. The following section provides an overview of the assets identified within the Study Areas and reviews their sensitivity to the EDM Project. Based on this, it is indicated as to whether they have been taken forward into the assessment, or not. These assets are mapped on **Figures 9.1 – 9.3**.

Table 9.7: Heritage assets within the Study Area

Asset type	Inner Study Area (200m)	Outer Study Area (3km+)
World Heritage Sites	0	1
Listed Buildings	4	131[7]
Conservation Area	0	8
Scheduled Monuments	6	21
Battlefields on the Inventory	0	0
Gardens or Designed Landscapes on the Inventory	1	3
Non-designated assets	67[8]	-[9]

Designated assets

World Heritage Sites

9.46 One World Heritage Site (WHS) – the Antonine Wall – lies in proximity to the EDM Project. At its closest the New 132kV OHL would be approximately 2km south-west of the westernmost tip of the WHS buffer. The ZTV indicates that the EDM Project would be visible from the asset but does not take into account intervening built development and vegetation. Further to this, any interaction between the setting of the WHS and the development would be minimal given its distance and form. Therefore, it has been judged that there would be no change to the asset's cultural value as a result of setting change, and it has been scoped out of the assessment.

Scheduled Monuments

9.47 There is a total of 27 Scheduled Monuments within the outer Study Area, of which six are in the inner Study Area. Those in the inner Study Area include five prehistoric sites - Craigmarloch Wood fort (schedule ref: SM4379); Fornet Cottage crannog (schedule ref: SM12890); No. 4 Ritchieston, enclosure (schedule ref: SM12807); Whitemoss Roman Fort (schedule ref: SM1652); and Drumcross enclosure (schedule ref: SM12806) - and the post-medieval Bishopton aqueduct (schedule ref: SM4326). HES has specifically requested that Craigmarloch Wood fort, No. 4 Ritchieston, enclosure, Whitemoss Roman Fort and Bishopton aqueduct be included in the assessment. For consistency, the Drumcross enclosure has also been included. The scheduled crannog (scheduled ref: SM12890) has been excluded due to intervening topography, which means that the EDM Project cannot be experienced from the site. The Existing 132kV OHL currently extend across the Whitemoss Roman Fort, which has two steel towers within it; there is no other physical interaction with the other Scheduled Monuments in the Study Area.

9.48 The remaining 21 Scheduled Monuments (schedule refs: SM7063; SM7067; SM6778; SM6779; SM7064; SM2908; SM7673; SM9915; SM9654; SM90107; SM12883; SM12886; SM12893; SM12800; SM12894; SM1653; SM12871; SM12889; SM12891; SM90230; SM3318), in the outer Study Area have settings that do not interact with the EDM Project, or which do not allow for it to be experienced at a scale that would affect their heritage value due to intervening development, topography or vegetation. The one exception to this is the High Castlehill enclosure (schedule ref: SM12886), which lies a short distance north of the inner Study Area. This scheduled monument is carried forward to assessment, along with the five Scheduled Monuments in the inner Study Area.

Gardens and Designed Landscapes

9.49 There are four Gardens and Designed Landscapes (GDLs) within the Study Area:

- Formakin (inventory ref: GDL00183);
- Duchal House (inventory ref: GDL00146);

[7] This is the number of individually listed building designations in the study area; however, each listing may cover more than one building. The GIS shapefile date therefore includes 212 listed buildings in total with 54 buildings having a shared listing in some way. It should be noted that due to the potential for curtilage listing the final figure of listed buildings could even be higher.
[8] This is the sum total of all assets (not records – see footnote below) identified via desk-based study (three assets), the site walkover (16 assets) and from the HER (32 WoSAS HER assets and 13 Inverclyde HER assets) and Canmore (four assets) data sets. Duplicates between the different datasets have been removed
[9] Duplicates between the different datasets have been removed but records that do not relate to heritage assets (e.g. historic buildings and structures; archaeological assets; the remains of past environments shaped by human action; gardens and designed landscapes; historic landscapes and townscapes; and, other sites, features or places in the landscape that have the potential to provide information on past human activity) have not been removed. Therefore, some of these records merely contain contextual historic environment information relating to findspots, place-names, and such.

- Finlaystone House (inventory ref: GDL00180); and
- Overtoun House (inventory ref: GDL00306).

9.50 Formakin GDL lies within the inner 200m Study Area and is transected by the Existing 132kV OHL, with two pylons within is perimeter. The New 132kV OHL would be located a short distance to the north-west of the Existing 132kV OHL, beyond the GDL's perimeter. The rest lie within the outer Study Area and the EDM Project does not interact with the setting of any of the other GDLs in the wider Study Area and, accordingly, only Formakin has been taken forward for assessment.

Listed buildings

9.51 There are 135 listed buildings in the outer Study Area, four of which are in the inner Study Area. Most in the outer Study Area stand in and around the main centers of habitation such as Port Glasgow, Dumbarton, Kilmacolm, Houston and Erskine. However, there are some outliers, particularly along the River Clyde.

9.52 There are 15 category A (outstanding) listed buildings; all located in the outer Study Area. The closest to the EDM Project is Formakin House (listing ref: LB10903), which has the Existing 132kV OHL running through its associated GDL (inventory ref: GDL00183). However, the house is orientated SSW-NNE, meaning that it does not directly look towards the EDM Project and it is furthermore set within an insular designed landscape well-screened by woodland, which directs views to the south. Consequently, Formakin House - and its adjacent category B listed lodge and gatehouse – have been scoped out of the assessment.

9.53 There are a further 87 category B (major) listed buildings in the Study Area. Of these, two – Cloak House (listing ref: LB12462) and Old Bishopston House (listing ref: LB10901) - stand within the inner Study Area. Further east is the Blantyre Monument (listing ref: LB10889). All three of these assets have been scoped into the assessment. All other category B listed buildings have been scoped out of the assessment as there is no potential for interaction between their settings' and their EDM Project, either because there is no overlap between the two, or, because there is no ability to experience the EDM Project as a result of intervening buildings, vegetation, or topography.

9.54 The remaining 32 listed buildings are all category C (representative). Two - 133 Old Greenock Road (listing ref: LB10902), which is the lodge to Old Bishopton House, and Richieston Cottages (listing ref: LB10899) – are located within the 200m Study Area, towards its eastern end. Aisla Lodge (listing ref: LB10893) is located nearby, just north-east of the inner Study Area boundary. These three assets have been scoped into the assessment as there is the potential for interaction between their settings and the New 132kV OHL.

Conservation Areas

9.55 There are eight conservation areas in the outer Study Area:

- Kilmacolm Conservation Area;
- The Cross, Kilmacolm;
- Houston Conservation Area;
- Mount Pleasant Drive, Old Kilpatrick Conservation Area;
- Lusset Road, Old Kilpatrick Conservation Area;
- Kirkton Hill, Dumbarton Conservation Area;
- Knoxland Square Conservation Area; and
- Dumbarton Town Centre Conservation Area.

9.56 None of these conservation areas fall in the inner Study Area and they are located at some distance from the EDM Project and do not have settings that fall within the EDM Project area, or that would be affected by the proposed works. Consequently, all the conservation areas have been scoped out of the assessment and are not considered further.

Designated assets scoping summary

9.57 **Table 9.8** below presents a summary of the 12 designated assets scoped into the assessment and the basis for their inclusion (see **Figure 9.4**). All other designated heritage assets have been scoped out due to there being no physical or setting interaction with the EDM Project.

Table 9.8: Designated assets scoped into the assessment

Asset name	Asset reference	Study Area	Interaction with EDM Project
Drumcross enclosure	Schedule ref: SM12806	Inner	Potential for setting change as a result of the New and Existing 132kV OHL
No. 4 Ritchieston, enclosure	Schedule ref: SM12807	Inner	Potential for setting change as a result of the New 132kV OHL (also requested by HES)
Bishopton aqueduct	Schedule ref: SM4326	Inner	Requested by HES
Whitemoss Roman Fort	Schedule ref: SM1652	Inner	Potential for physical change as a result of the decommissioning of the Existing 132kV OHL and for setting change as a result of the New and Existing 132kV OHL (also requested by HES)
Craigmarloch Wood fort	Schedule ref: SM4379	Inner	Potential for setting change as a result of the New and Existing 132kV OHL (also requested by HES)
High Castlelhill enclosure	Schedule ref: SM12886	Outer	Potential for setting change as a result of the New and Existing 132kV OHL
Aisla Lodge (category C)	Listing ref: LB10893	Outer	Potential for setting change as a result of the New and Existing 132kV OHL
The Blantyre Monument (category C)	Listing ref: LB10889	Inner	Potential for setting change as a result of the New 132kVkV
Richieston Cottages (category C)	Listing ref: LB10899	Inner	Potential for setting change as a result of the New and Existing 132kV OHL
Old Bishopston House (category C) and 133 Old Greenock Road (category C)	Listing ref: LB10901and LB10902	Inner	Potential for setting change as a result of the New 132kV OHL
Formakin GDL	Inventory ref: GDL00183	Inner/ outer	Potential for physical change to the GDL as a result of the decommissioning of the Existing 132kV OHL and for setting change as a result of the New 132kV OHL (also requested by HES)
Cloak Road (category B)	Listing ref: LB12462	Inner	Potential for setting change as a result of the New and Existing 132kV OHL

9.58 There are approximately 971 HER and Canmore records[10] in the outer Study Area, with a total of 67 non-designated assets[11] in the inner Study Area. However, the Barochan Cross (WoSAS ref: 7653) - which is mapped as standing within the 200m Study Area, 127m from

[10] It should be noted that not all records within the HER and Canmore datasets relate to heritage assets (e.g. historic buildings and structures; archaeological assets; the remains of past environments shaped by human action; gardens and designed landscapes; historic landscapes and townscapes; and, other sites, features or places in the landscape that have the potential to provide information on past human activity) and that some merely contain contextual historic environment information relating to findspots, place-names, and such.

[11] This is the sum total of all assets (not records – see footnote below) identified via desk-based study (three assets), the site walkover (17 assets) and from the HER (32 WoSAS HER assets and 13 Inverclyde HER assets) and Canmore (four assets) data sets. Duplicates between the different datasets have been removed.

a proposed access route to the Existing 132kV OHL - has in fact been removed and placed in Paisley Abbey, meaning that it is not considered further in the assessment.

9.59 Similarly, the reported Iron Age settlement on Witches Hill (Canmore ID: 43356) has been excluded from the assessment. This is because, the report made in the 1967 edition of 'Discovery and excavation in Scotland'[xix] cites no evidence of any kind to support this identification. In addition, Witches Hill is an unknown location, so the HER record assumes that the site is located on Barbeg Hill. This area was visited during the field visit and no above-ground evidence of a settlement was identified, suggesting that the settlement has been inaccurately located, or incorrectly identified.

9.60 The pulling working area (see paragraph 9.76) of Wood Pole 29, and access - intersects with the Bishopston rail tunnels (WoSAS ref: 21142 and 21443; Canmore ID: 45070 and 37340); however, these works will not affect the tunnels physically or through their setting, so they have been scoped out of the assessment.

9.61 The last non-designated asset to be scoped out of the assessment is the site of Crosshill Farmstead (WoSAS ref: 51484). This asset lies within the 50m Infrastructure Location Allowance (ILA) which applies to the proposed access to the two existing steel towers on the Scheduled site of Whitemoss Roman Fort but lies on the opposite side of Old Greenock Road away from the Existing 132kV OHL meaning that to be functional, the access cannot be relocated to this area.

9.62 **Table 9.9** below summarises the 27 remaining non-designated assets that have been identified as potentially being affected by the New 132kV OHL – either physically as a result of their location intersecting directly with EDM Project or having the potential to, due to their being located within the 50m ILA which applies to the components of the New 132kV OHL and access roads. Non-designated assets which derive significance from their settings and interact with the New 132kV OHL have also been scoped into the assessment. All assets scoped into the assessment are shown on **Figure 9.4** and the assessment for non-designated assets is presented in **Appendix 9.3.**

9.63 No non-designated assets have been identified as being affected by the decommissioning of the Existing 132kV OHL.

Table 9.9: Non-designated assets scoped into assessment

Asset name	Asset reference	Study Area	Interaction with EDM Project
Park Erskine derelict house	WOA10	Inner	Potential physical effect lies within ILA for New 132kV OHL Pole 82
Bishopton Church	WOA19	Outer	Potential setting effect from the operation of the New 132kV OHL
Site of former outbuilding at North Porton	WoSAS ref: 42302	Inner	Potential physical effect lies within working area of New 132kV OHL Pole 12
Bishopston quarry site	HMA3	Inner	Potential physical effect: lies within route of access and working area ILA of New 132kV OHL Pole 29
Drums field boundary/ plantation bank	WOA16	Inner	Potential physical effect lies within route of access between New 132kV OHL Pole 72 - 76
Drums House and non-designated designed landscape	WOA17	Inner	Potential setting effect from the operation of the New 132kV OHL
Barscube field clearance	WOA12	Inner	Potential physical effect lies within the working area of New 132kV OHL Pole 95
Dargavel Burn hut circle(?)	WoSAS ref: 68535	Inner	Potential physical effect lies within the working area of New 132kV OHL Pole 113
Knockmountain field clearance	WOA8	Inner	Potential for physical effect lies within the working area of New 132kV OHL Pole 115
Knockmountain clearance cairn	WoSAS ref: 68531	Inner	Potential physical effect lies within working area of New 132kV OHL Pole 115
Knockmountain settlement/ building	WoSAS ref: 68530	Inner	Potential physical effect extends into the working area of New 132kV OHL Pole 115
Knockmountain quarry	HMA2	Inner	Potential for physical effect lies within working area of the New 132kV OHL Pole 126
Site of Leperstone building	HMA1	Inner	Potential for physical effect lies within working area of New 132kV OHL Pole 131 and area of tree removal
Burnhead Moor Mound	Inverclyde ref: 7013	Inner	Potential setting effect from the operation of the New 132kV OHL
High Auchenleck mound	Inverclyde ref: 12774	Outer	Potential setting effect from the operation of the New 132kV OHL
Devol Moor mound	Inverclyde ref: 12773	Outer	Potential setting effect from the operation of the New 132kV OHL
Devol Moor quarry pit	WOA11	Inner	Potential for physical effect lies within working area ILA of the New 132kV OHL Pole 169
Site of Barscube Mill	WoSAS ref: 42306	Inner	Potential for physical effect lies within the New 132kV OHL ILA for Pole 57 and its access
Gled Craig field clearance	WOA3	Inner	Potential for physical effect lies within the New 132kV OHL ILA for Poles 105 and 106
Gled Craig field clearance	WOA14	Inner	Potential for physical effect lies within working area ILA of the New 132kV OHL Pole 106
West Glen clearance cairn	WoSAS ref: 68536	Inner	Potential for physical effect lies within the New 132kV working area and access ILA for Pole 113
Dargavel Burn clearance cairn	WoSAS ref: 68534	Inner	Potential physical effect lies within the New 132kV OHL working area and pole location ILA for Pole 113 and 114
Dargavel Burn clearance cairn	WoSAS ref: 68533	Inner	Potential physical effect lies within New 132kV OHL access ILA
Knockmountain clearance cairn	WoSAS ref: 68529	Inner	Potential physical effect lies within the New 132kV OHL working area ILA for Pole 117
Bomb crater(s)	Canmore ID: 353359	Inner	Potential physical effect lies within the New 132kV OHL access ILA
Craigmarloch Wood enclosure	Inverclyde ref: 12772	Inner	Potential physical effect lies within the New 132kV OHL working areas/ pole locations of Poles 145 and 146
Cunston clearance cairn	WOA13	Inner	Potential for physical effect lies within the New 132kV OHL pole location/ working area for Pole 106

Areas of archaeological potential

9.64 Based on the pattern and cultural value of known assets in the Study Area (drawn from the HER/ NHLE/ Canmore data (see **Figure 9.1 – 9.3**) and review of historic mapping and available aerial/ LiDAR imagery) and history of land use several areas of archaeological potential have been identified along the route of the New 132kV OHL. These include:

- The area between New 132kV OHL Poles 4-9, which is located to the south of the prehistoric enclosure at Drumcross enclosure, where there may be further associated remains.
- The area between New 132kV OHL Poles 16-21, which is located a short distance to the south-east and north-west of the Scheduled prehistoric Ritchieston enclosure.
- The area between New 132kV OHL Poles 29 – 56, which is within 1km of the Scheduled Roman Fort at Whitemoss. As highlighted by SCARF, there is the potential for extra-mural activity in the surrounding area, which may explain the discovery of a number of Roman finds (WoSAS ref: 7908) nearby. The works in this area also extend along the banks of the Clyde where there may be a potential for alluvial deposits and/ or further archaeology relating to the nearby Scheduled crannog at Fornet Cottage.
- The area between New 132kV OHL Poles 112 – 116: Works here lie in the vicinity of the possible hut circle at Dargavel Burn and the settlement/ building at Knockmountain. They also fall between the two Scheduled prehistoric sites at High Castlehill and Craigmarloch Wood.

9.65 See **Figure 4.1** for a plan showing pole locations and numbers.

9.66 The heritage significance of any hitherto unknown remains that may be present in these areas is uncertain. High value remains are unlikely but, if encountered, would need to be preserved in-situ. It is more likely that any remains are of low to medium value. Physical effects to remains of these value could be partially offset by a programme of recording.

The 'Do Nothing' Scenario

9.67 In the 'do nothing' scenario there will be little change to the value of the heritage assets within the Study Area. Current agricultural land-use will most likely continue and there will be no change to the value of the heritage assets, other than the erosion of features through natural processes and agricultural activities. The current rough pasture and moorland land-use (on higher slopes) will also likely continue, limiting the potential for disturbance to heritage assets, and only natural decay (weathering and erosion) will affect the surviving upstanding remains. In wooded areas, further natural deterioration may occur as a result of tree rooting and animal action may cause some further deterioration. It should, however, be noted that patterns of rural land use may change as a consequence of the UK leaving the European Union and as Scottish Government objectives drive an increase in woodland expansion; both of which may have a potentially adverse effect.

9.68 The effects of climate change, such as increased temperatures and heavier rainfall, can also affect heritage assets. For example, changes to groundwater regimes can alter the soil conditions and preservation of archaeological remains, while increased severe rains and flooding can erode above ground structures. In these ways, climate change may contribute to a small extent to the gradual decline of some assets but is not, in its own right, a source of effect.

Project Design Considerations

New 132kV OHL

9.69 The New 132kV OHL has been designed to avoid physically interacting with any designated assets and interaction with non-designated assets has been minimised.

Infrastructure Location Allowance

9.70 As per **Chapter 4**, a 50m ILA is being proposed to permit the refinement or micrositing of the location of components of the New 132kV OHL and associated infrastructure including access tracks. Consequently, a review has been made of all heritage assets located within this ILA. It has been assumed that the 30m by 15m working areas around each pole will be moved along with pole locations.

9.71 There are 12 non-designated heritage assets that do not physically interact with any other elements of the EDM Project, and which will only be affected as a result of the ILA. These assets, which are all non-designated assets, are summarised in **Table 9.9**. above.

9.72 Effects to these 12 non-designated assets should be avoided or minimised via the good practice measures set out below. However, since the need to consider other environmental factors could mean that avoiding effects to these heritage assets may not be possible, a maximum case assessment of physical effects has been undertaken and is presented in **Appendix 9.3**. No significant effects are predicted, but in some cases additional mitigation in the form of a watching brief may be required. As previously indicated, the assessment of construction related setting effects have not been assessed as any effects will be temporary. However, micrositing could also lead to operational effects as a result of setting change that affects the cultural value of assets. Therefore, the potential effect of this has also been assessed; the results are presented in in **Appendix 9.3**. No significant effects are predicted.

9.73 Unless the New 132kV OHL is being moved further away, no micrositing should take place in the vicinity of high value designated or non-designated assets.

Mitigation

9.74 As noted in **Chapter 4**, mitigation has been embedded through the design process for a range of assessment topics and those assessments have been undertaken and are presented on the basis that the embedded mitigation forms an integral part of the EDM Project. However, specific additional mitigation measures ('additional mitigation') are also proposed to prevent, reduce and offset likely adverse effects which could not be avoided through design.

9.75 This chapter therefore recognises:

- Embedded mitigation – items that are embedded through the design of the EDM Project forming an integral part of it and which will be delivered during the construction process as detailed below; and
- Additional mitigation – items that are further required to mitigate the likely adverse effects of the EDM Project and which will be implemented to avoid, reduce or offset these effects identified in relation to particular topics. The additional mitigation measures are detailed in relation to specific likely adverse effects identified below.

Embedded Mitigation/Good Practice Measures

9.76 A number of embedded mitigation/good practice measures will be implemented to prevent, reduce, or offset, the likely physical (direct) effects of the EDM Project on heritage assets in line with requirements of national, regional and local planning policies, as well as legal requirements.

9.77 Working areas can be modified in size/ shape to avoid environmental effects. They will also be cordoned off, thus preventing accidental damage to known heritage assets.

9.78 To avoid effects such as compression and truncation from access Low Ground Pressure (LPG) vehicles and matting will be utilised, where ground conditions allow.

9.79 Where breaches of existing drystone wall cannot be avoided these will be reinstated by a professional drystone wall builder upon completion of the construction works in affected areas.

9.80 Where linear assets survive as upstanding features (principally banks and walls), access tracks will be routed through any existing gates, or through broken or less well-preserved sections of banks or walls wherever possible.

9.81 Details of these measures will be included in the Construction and Decommissioning Environmental Management Plan (CDEMP), which will be implemented throughout the construction and decommissioning of the EDM Project (See **Appendix 4.1**).

9.82 The CDEMP will also include written guidelines (See **Appendix 4.2**) for use by all construction contractors, outlining the need to avoid causing unnecessary damage to known heritage assets. The guidelines will contain arrangements for calling upon retained professional archaeological support in the event that features of potential archaeological interest (such as building remains, human remains, artefacts etc.) are discovered in areas not subjected to archaeological monitoring. The guidance will make clear the legal responsibilities placed upon those who disturb artefacts or human remains.

9.83 Guidelines on the protection of archaeological sites within forestry areas are set out in the Forestry Commission's Forests and Archaeology Guidelines (1995). These guidelines include measures to protect archaeological sites and monuments during felling operations, which will be observed during felling works. It is expected that all forestry works will be conducted with due regard to the guidelines and any discoveries made reported to the forestry management and local authority archaeological advisors, who will advise as to whether any mitigation is required.

9.84 These embedded mitigation/ good practice measures will be in place and are therefore taken account of in the assessment of effects section below. For clarity, where good practice measures are being enacted and the way in which they avoid/ reduce effects is stated in the assessment of physical effects.

Assessment of Effects

New 132kV OHL

9.85 The assessment of effects is based on the project description as outlined in **Chapter 4: Project Description**. Where appropriate (e.g. due to historical, functional or other relationships), some assets have been grouped for assessment. Unless otherwise stated, potential physical effects identified are considered to be permanent and negative. Operational effects are long-term, as they are reversible if the OHL is removed.

Construction Effects

Predicted Construction Effects

9.86 The construction process for the New 132kV OHL is detailed in **Chapter 4: Project Description** and the location of all proposed construction activity is illustrated on **Figure 4.1** In summary, potential construction effects may arise from:

- **Access:** LGP Vehicles that do not require tracks will be used in areas of dry pasture and level moorland, in wetter or more sensitive areas wood and steel matting will be used. In addition, stone tracks will be utilised on less competent ground surfaces i.e. peat; these will be constructed as floating tracks on a geotextile and geogrid, or via cut and fill.
  - The use of LGP vehicles and matting will prevent harm to any below ground heritage assets, however, any above ground remains may be damaged as a result of compaction, or truncation.
  - Stone tracks, particularly those created via cut and fill, have a greater potential to cause harm as a result of compaction and truncation; however, no proposed stone tracks intersect with any known cultural heritage assets.
- **Construction of temporary construction compounds, laydown areas and working areas:** Two compounds are proposed, one at each substation; however, neither interacts with any known heritage assets. Temporary laydown areas, measuring 20m by 20m and covered by crushed stone, are also required. However, none interact with the known heritage assets. Working areas around each OHL tower will measure 30m by 15m. These working areas will not be covered by crushed stone or utilise matting. If necessary, the shape of these can be varied and/ or taped-off to delineate the area for environmental protection reasons. Therefore, it should be possible to avoid effects to heritage assets in these areas.
- **Excavation of pole foundations:** Pole excavation will be $3m^2$ by 2m deep and will be backfilled with excavated material. It may therefore be assumed that any heritage assets within the excavation area will be subject to physical change e.g. damage, truncation, or, depending on their size, even total loss.

- **Temporary pulling/ stringing areas:** These are formed with wood/steel matting, which will minimise the potential for harm to buried heritage assets. However, above ground heritage assets may still be compressed or damaged.

9.87 No nationally designated heritage assets will be physically affected by the construction of the New 132kV OHL.

9.88 There are 12 non-designated heritage assets that intersect with the New 132kV OHL (refer to **Figure 9.4**). All of these assets will be highly sensitive to physical change, the effect of which will be direct, permanent, and negative. The assessment of these effects has been undertaken and is presented in **Appendix 9.3.** No significant effects were identified.

Proposed Additional Mitigation

9.89 Mitigation proposed to help avoid, minimise and off-set the non-significant construction effects to the non-designated assets is presented in **Appendix 9.3**. In terms of fieldwork, watching briefs will be required for where the New 132kV OHL physically interacts with known heritage assets. In addition to the mitigation outlined in relation to the known non-designated heritage assets in **Appendix 9.3**, it is recommended that – as a precautionary measure - a watching brief is undertaken during ground intrusive works in areas of archaeological potential.

9.90 Where physical effects cannot be avoided no development shall take place within the areas indicated (i.e. asset locations on **Figure 9.4**) until the applicant has secured the implementation of a programme of archaeological work in accordance with a Written Scheme of Investigation (WSI) that has been submitted to and approved by the archaeological advisers to the planning authority.

Residual Construction Effects

9.91 The significance of effect to the non-designated heritage assets identified as interacting with the New 132kV OHL following mitigation is presented in **Appendix 9.3**. No significant effects are predicted.

Operational Effects

Predicted Operational Effects

9.92 The operational effects of the New 132kV OHL relate to the introduction of wooden poles and OHL, which on average are a height of 15m. Where these can be experienced from, to, or in conjunction with a heritage asset, they may affect its value (via setting change) and as such, are direct effects.

9.93 The assessment of operational effects to designated heritage assets is presented in **Table 9.10** below. All assets that HES requested to be assessed have been included. Unless indicated otherwise, all predicted effects are long-term and negative.

9.94 The assessment of operational effects to the 12 non-designated assets physically affected and additional four assets that are sensitive to setting change is presented in **Appendix 9.3**. No significant effects are predicted.

Table 9.10: Operational effects to be designated heritage assets as a result of setting change

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
Drumcross enclosure	Schedule ref: SM12806	This scheduled monument is located approximately 120m north and east of the New 132kV OHL, at the eastern end of the inner Study Area. This monument, which lies in farmland at 30m above sea level, comprises a circular cropmark, with no above ground remains. It is one of a few examples of this type of monument in this area and has not been physically investigated, but probably dates from the later prehistoric period. The enclosure measures approximately 30m in diameter in extent, while the ditch is around 2m wide. A clearly defined entrance, some 4.5m wide, is located on the west side of the monument. The situation of the monument and the insubstantial single ditch may indicate that the primary purpose of the enclosure was unlikely to have been defensive and is probably an enclosed domestic site, such as a settlement or stock enclosure. No internal features are evident on the aerial photographs, but the cropmark has only appeared once after a prolonged drought suggesting that it is deeply buried. This means that there is a high potential for the survival of archaeological deposits and the remains of structures, together with artefact and ecofact assemblages on and around the site. The ground in the area is also waterlogged indicating a high potential for the good preservation of organic remains. It is potentially of group value with a second non-designated enclosure (WoSAS ref: 7918) lies c. 170m uphill, to the north.	High This asset has a high cultural value, derived primarily from its intrinsic characteristics as a well preserved later prehistoric enclosure with the ability to further our understanding of prehistoric settlement in the area, particularly of the nature and functions of enclosed sites which is little understood. It therefore has the potential to inform our understanding of the construction, use and abandonment of the monument and, if it is a settlement, details of the domestic architecture, and activities within. Any artefacts may also have the potential to further our understanding trade and of interaction with other communities in the area, while surviving buried soils can inform our understanding of the environment in which the monument was constructed and of land uses of the time. Spatial analysis of unenclosed settlements and other settlement types in the region may further our understanding of settlement location, changes in architectural practice through time, the structure of society, and economy. The enclosure's importance is increased by its proximity to other monuments of potentially contemporary date and its capacity to inform us about the nature of the	Low The setting (or contextual characteristics) of the monument contributes in a limited way to an understanding of its function, by identifying that it is unlikely to be defensive, and in a general sense the open undeveloped surroundings allow for an appreciation of the asset in a similar environment to that which it was constructed .However, the asset's main value is in its intrinsic characteristics. Given the limited contribution that setting makes to this asset's heritage value its sensitivity to setting change as a result of the New 132kV OHL is judged to be low, and the way in which the EDM Project is likely to interact with the asset's setting, it is judged that the enclosure's sensitivity to setting change is low.	Negligible The EDM Project would result in the replacement of the Existing 132kV OHL, which is supported by steel towers approximately 20m high, by a New 132kV supported by wooden poles that are on average 15m high. The Existing 132kV OHL is sited in the same direction and at a similar distance from the asset as the New 132kV OHL. There is a strong tree line either side of Drumcross Road to the east of the enclosure, meaning that only the New 132kV OHL to the south (i.e. Poles 4-6) will be fully experienced in tandem or from the site of the asset.	None The visibility of the New 132kV will not affect the ability to understand the enclosure's function as a result of its topographical siting, nor materially alter an appreciation of how the open setting is similar to that in which it will have been constructed).

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
			relationships between these monuments.			
No. 4 Ritchieston, enclosure	Schedule ref: SM12807	This Scheduled Monument is located at the eastern end of the inner Study Area approximately 110m east and north of the New 132kV OHL. This monument comprises an enclosure, identified from the air as a circular cropmark. It is one of a few examples of this type of monument in this area. The enclosure measures 33m in diameter with a 2-3m wide ditch; to the west of this, there is a clearly defined entrance measuring 6.6m wide. No internal features have been identified from the aerial imagery, but as the cropmark has only appeared once after the prolonged drought of 1976, it is thought that the feature may be deeply buried beneath a thick layer of colluvium. Consequently, any internal features are likely to be deeply buried and well-preserved. The site is also partially waterlogged suggesting a high potential for well-preserved organic remains. The enclosure has not been excavated but based on its form and size, the monument is interpreted as an enclosure of later prehistoric date. Situated in farmland 40m above sea level, approximately 1km north-west of the Scheduled Drumcross enclosure, the relatively flat topography ensures good views in most directions, save to the north where it is obscured by trees.	High Derived primarily from its intrinsic characteristics as a well preserved later prehistoric enclosure with the ability to further our understanding of prehistoric settlement in the area, particularly, how people lived, where they came from, and who they had contact with. The enclosure's importance is increased by its proximity to other monuments of potentially contemporary date and its capacity to inform us about the nature of the relationships between these monuments.	Low The setting of the monument contributes in a limited way to the understanding of its function, albeit in identifying that it is unlikely to be defensive. In a general sense the open undeveloped surroundings also allow for an appreciation of the asset in a similar environment to that which it was constructed. Given the limited contribution that setting makes to this asset's heritage value its sensitivity to setting change as a result of the New 132kV OHL is judged to be low and the way in which the EDM Project is likely to interact with the asset's setting, it is judged that the enclosure's sensitivity to setting change is low.	Negligible The EDM Project would result in the replacement of the Existing 132kV OHL, which is supported by steel towers approximately 20m high, by New 132kV OHL supported by wooden poles that are on average 15m high. The Existing 132kV OHL is visible in full to the south of the site across the fields and in part to the west above the tree line along the M8. The New 132kV OHL will be located closer to the asset and a greater number of – albeit smaller - wooden poles will be visible compared to the larger steel towers. See wireline **CH3** in **Appendix 9.2**	None Approximately 13 wooden poles will be visible in tandem with the asset. However, this will not affect the ability to understand its function as a result of its topographic siting, nor materially alter an appreciation of how the open setting is similar to that in which it will have been constructed.
Bishopton aqueduct	Schedule ref: SM4326	This monument is located within the inner Study Area, approximately 15m south of the New 132kV OHL. Built c. 1840, the monument comprises a slender single-span cast-iron arched aqueduct measuring 13.7m in length and features brick and stone abutments. It serves to convey an unnamed watercourse over the cutting of the Glasgow, Paisley and Greenock Railway built c. 1836-41. See **Plate 9.1** in **Appendix 9.2**.	High Derived primarily from its intrinsic characteristics and its ability to evidence the aqueduct's form, construction and use, and inform our understanding of 19th century engineering, communications, transport and industry. It also derives value from its associated characteristics and its relationship with the Glasgow, Paisley and Greenock Railway.	Low In terms of setting, the aqueduct is located in undeveloped agricultural land a short distance south of the M8. It has an important functional and historical relationship with the railway and it continues to fulfil its original function – although on inspection it appears to be heavily silted-up and partially vegetated. The watercourse remains legible in the adjacent fields.	Negligible The EDM Project would result in the replacement of the Existing 132kV OHL. It stands some 500m to the south of the asset and the conductors are supported by steel towers approximately 20m high. The New 132kV OHL includes smaller wooden poles, which average 15m high. These will be routed along a stretch of gently sloping agricultural land to the north of the asset, along the route of the M8. See wireline **CH2** in **Appendix 9.2**	None While it may be possible to experience the New 132kV OHL more readily from within the setting of the aqueduct, their presence will not affect the legibility of the relationship between the monument and the railway and the watercourse and therefore will not affect its heritage value.
Whitemoss Roman Fort	Schedule ref: SM1652	Whitemoss Roman fort and attached annex, lies approximately 550m to the south of the New 132kV OHL. The Scheduled Monument is visible from the air as cropmarks which show the outline of the internal buildings, roads and external defences of the fort. The buried remains are well-preserved and largely in-situ. They lie across three fields on top of a promontory that rises above the surrounding landscape; the slope falls off steeply on three sides with a more gradual slope to the south-east of the fort, necessitating more elaborate defences in this area. The forts position affords it significant views to the north over the Clyde estuary, allowing it to monitor a putative fording point along the river (WoSAS ref: WoSAS 7900). It also has a direct line of sight with Old Kilpatrick Roman Fort, the western terminus of the Antonine Wall. Along with the fortlets of Lurg Moor (SM1653) and Outerwards (SM4377), which lie further west, Whitemoss comprises the known western defences of the Antonine Wall, a component part of the transnational 'Frontiers of the Roman Empire' World Heritage Site. Before its discovery in 1949, little was known about the Roman defence of the Clyde estuary, leading R. G. Collingwood to suggest that the Antonine Wall was a system of frontier control, rather than purely defensive. This interpretation has survived into the current literature about the function of the Antonine Wall. The subsequent identification of the fort at Whitemoss can be viewed as supporting this interpretation, providing a heavily military presence, but acting more as a symbolic and perceptual rather than a purely physical barrier. While the wall and its flanking defences were potentially permeable, the complete surveillance and signals network was designed to ensure that any large incursion from the north could be met rapidly and in force. The presence of distinctive barrack blocks, excavated in the south-west corner of the fort, were interpreted as housing a cavalry unit, underlines the fort's 'rapid	High Derived from a combination of its intrinsic, contextual and associative characteristics. In terms of intrinsic characteristics, the well-preserved and largely in-situ physical remains are highly important in terms of their high research potential and ability to further our knowledge of the dating, construction and internal layout of Roman forts; and the use and function of the Annex and its relationship to the fort. The site's functional relationship with the Antonine Wall mean that it also has a high potential to inform our understanding of the Antonine occupation of Scotland, particularly the deployment of garrisons and the construction and strategic layout and function of the Antonine Wall, its outer defences, and the role of signaling and other communications in controlling the Frontier. The Neolithic features also suggests that there is the potential to understand	Moderate In terms of setting the elevated strategic position of the monument and the views it has of the Clyde and Old Kilpatrick are important to understanding the defensive function of the fort and its association with the Antonine Wall and fortlets of Lurg Moor and Outerwards.	None The New 132kV OHL will replace the Existing 132kV OHL, which runs through the scheduled site. The New 132kV OHL is proposed approximately 500m downhill from the fort at its closest. The ZTV suggests that 20+ poles may be visible, but it does not take into account the intervening vegetation and built development around Old Bishopton House (listing ref: LB10901), which lies directly north of the fort. These factors greatly reduce the ability to experience the New 132kV OHL from the site. Critically, although the replacement line may be visible it does not sever or materially erode strategic visual/functional relationships with other components of the Antonine frontier system. See wireline **CH1** in **Appendix 9.2**	None The New 132kV OHL will be perceptible at some distance from the fort in the long views towards the Clyde and Antonine Wall. However, the new poles and conductors will not be prominent in these views nor will they affect the ability to appreciate the fort's strategic position, nor its defensive function and association with the Antonine Wall and nearby fortlets.

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
		response' function. (It is important to note that the preferred Roman approach to combat was not to wait for besiegement but meet any adversary in the field.) Excavations of the fort in the 1950s focused on the defences and the south-east quarter of the site, where the principia (or headquarters building) was located along with a granary and barracks block. It was under the annex that Neolithic pits containing remnants of domestic or industrial processing, possibly of ritual nature, were found. The excavations confirmed that the fort was of Antonine date (AD 140 – 160) and had three possible phases of occupation. A defended annex lies to the north of the fort; such features are common to Roman forts in Scotland, but little is known about them. Typically, they are interpreted as having either housed industrial working and storage areas, or a form of defended civilian settlement attached to the fort. Two steel towers forming part of the Existing 132kV OHL currently stand within the scheduled area over and adjacent to the fort rampart. In 2016, a watching brief was undertaken during pylon repair works (with SMC). All work took place on ground previously disturbed to erect the pylon, and natural subsoil was not reached. No archaeological finds or features were uncovered. See **Plates 9.2** and **9.3** in **Appendix 9.2**	the use of the site before the Roman period, and later evidence may also exist.			
Craigmarloch Wood fort	Schedule ref: SM4379	This site lies on top of a craggy hill, 775m south-west of the Scheduled hillfort at High Castlehill (SM12886) and approximately 200m from the route of the New 132kV OHL and the Existing 132kV OHL. The monument consists of a timber palisaded enclosure (with no visible surface remains), which carbon dating has indicated dates to sometime between the Late Bronze Age and the start of the Iron Age. This phase of occupation was superseded by a timber laced or vitrified fort, the remains of which are still visible above ground. To the SW and NE of the fort are two associated annexes; the date of these are unknown, but they are most likely Iron Age. See **Plate 9.4** in **Appendix 9.2**	High As a fine example of a lowland vitrified fort, it derives its high cultural value primarily from its intrinsic characteristics as attested in the, albeit limited, 1960s excavations (e.g. the sequence of palisade to fort, the early and late dates, the large mass of Iron Age finds, and the details of rampart construction techniques). However, the bulk of the fort remains in-situ and modern excavation may reveal much more information that could further our understanding of prehistoric settlement, defence, and technology.	Low In terms of setting (or contextual characteristics), the elevated and strategic position of the fort is important in understanding its function; however, it is currently set within very dense woodland, which allows for little appreciation of this. Given this, the asset's sensitivity to the New 132kV OHL is considered to be low.	None The New 132kV OHL will be located approximately 200m to the east of this monument, a similar distance to the Existing 132kV OHL; the route of which the line will follow. The ZTV suggests that 20+ OHL poles will be visible from this monument, however, this does not take into account the fact that the site is located within woodland, with no views in/ out meaning that it will not be possible to experience the New 132kV OHL. See wireline **CH4** in **Appendix 9.2**	**None** The New 132kV OHL will not be perceptible from the site. Even if it was (due to tree removal) the presence of the line will make little material change to the character landscape setting of the asset and will not meaningfully change the way in which the fort's strategic position and defensive function is understood.
High Castlehill enclosure	Schedule ref: SM12886	The monument occupies a prominent position on the summit (approximately 140m above sea level) of High Castlehill, 125m north of the inner Study Area boundary. The fort survives in good condition above ground comprising the remains of an enclosure, with upstanding remains of a bank that surrounds an area measuring 34m north to west by 24m and stands between 0.3m to 1.5m high. A break in the bank on the east side marks the position of an entrance around 17m wide. The entrance is of elaborate form, with its south wall turning outwards to flank the entrance for around 5m. In the south of the enclosure is a large circular platform, potentially the remains of a roundhouse, measuring about 12m across. The monument, which has not been excavated or disturbed, is most likely a small defended settlement occupied during the Iron Age, sometime between 800 BC and AD 400. It is of note that a second scheduled hill fort probably of similar date is located 775m to the south-west, on the summit of Craigmarloch (SM4379).	High The high cultural value of this asset is derived primarily from its intrinsic characteristics as archaeological remains that can make a significant contribution to our understanding of defended settlements in later prehistoric south-west Scotland. The scheduling entry also indicates that the site derives value from associative characteristics, as the 1st Edition OS map, which does not depict the monument itself, refers to the location as 'High Castlehill' implying it was a known place of fortification	Moderate Setting contributes to understanding the defensive intent of the inhabitants, providing a measure of physical and symbolic dominance over the surrounding landscape.	None The ZTV suggests that 20+ OHL poles will be visible from this monument, however, visibility will be reduced to the south and south-east as a result of tree cover along Cloak Road. The section of New 132kV OHL that will be visible from High Castlehill is located approximately 30m beyond the Existing 132kV OHL, the route of which it follows through undeveloped agricultural land. Whilst the section visible from the monument will include a greater number of supporting poles than towers for the Existing 132kV OHL, these will be smaller in height and mass.	**None** The New 132kV OHL will be perceptible, but not prominent, within views from the fort. However, its presence will make little material change to the character of the landscape setting of the asset and will not meaningfully change the way in which the fort's strategic position and defensive function and relationships are understood.
Aisla Lodge (category C)	Listing ref: LB10893	This category C listed former manse (clergy house) is comprised of a two-storey stone-built building, which dates to the mid-19th century. Historic maps show that the house was originally comprised of a L-shaped building adjoined to the west by a U-shaped building. To the rear there is a formal garden beyond which there is woodland forming the Kirkland strip, which also extends east around a field adjacent to the building. The original approach between the road and house continued around the front of the house – screened from the road by further trees - to the west where it separated leading to the rear gardens and to a graveyard associated with Bishopton/ Erskine Parish Church, which lies a short distance to the north-west. This layout remains largely unchanged up until the mid-20th century when the U-shaped building is demolished.	High The high cultural value of this asset is derived primarily from its architectural interest as an example of a mid-19th century clergy house. It is also likely to have some historic interest as a result of its association with the parish church.	Low In terms of setting, the loss of the garden and original approach has affected the legibility of the building, however, it retains an important historic and functional relationship with Bishopston/ Erskine Parish church, as reflected in their spatial – but not necessarily visual – relationship.	Negligible The ZTV indicates that up to 19 poles of the New 132kV OHL may be visible from this listed building across the gently undulating fields to the south of it, however, it does not take account of intervening built development and isolated tree cover which will reduce the number visible.	**None** The New 132kV OHL will be perceptible, but only at a great distance and their presence will mean little material change to the landscape setting of the asset and will not meaningfully change the way in which the building is understood.

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
		The manse will have once housed the incumbent minister of Erskine Parish but in recent years the building has been used as a care home for the elderly and further alterations have occurred.			The route of the New 132kV OHL that will be visible follows that of the Existing 132kV OHL, but is located approximately 30m further south, or away, from the building. Whilst the New 132kV OHL includes more supports than the Existing 132kV OHL, they are shorter wooden poles as opposed to 20m high steel towers.	
The Blantyre Monument (category B)	Listing ref: LB10889	This category B listed monument is located in a field to the north of the B815. The monument comprises an obelisk on square base, measuring 24m high. Designed by the prominent and prolific Scottish architect William Burn. It was erected c.1830 as memorial to Robert Walter Stuart (10 June 1777 – 22 September 1830), 11th Lord Blantyre whose main residences were the immediately adjacent Erskine House, as well as Lennoxlove House (East Lothian) and Place of Cardonald (Renfrewshire). The monument is inscribed: '*Erected by the county of Renfrew* *to the memory of the right honorable* *Robert Walter 11th Lord Blantyre* *A Major-General in the British Army* *and formerly Lord Lieutenant of* *Renfrewshire* *In testimony of respect for his* *public services and as a tribute* *of esteem of his private worth*.' See **plate 9.6** in **Appendix 9.2**	High The high cultural value of this monument is derived from a combination of its architectural and historic interest. Its architectural interest derives from its design, which in terms of shape and height is designed to contrast with its natural surroundings in order to be visually prominent and eye-catching. In terms of its historical interest, its value derives from its association with Lord Blantyre - through which there are links to the Erskine Estate and the Napoleonic war - and the architect William Burn.	Moderate In terms of setting, visibility is key to the function of the monument which is designed to stand in contrast to its rural surroundings and be highly prominent and eye-catching. To a certain extent, this design intent has already been compromised as existing wooden poles and steel OHL towers as well as telegraph poles can be viewed in conjunction with the monument from Golf Road, and the B815, the main public accesses around the monument. The monument's siting on lands held by the Blantyre's, and immediately adjacent to their Erskine Estate with which it may be viewed, is also important to its historical interest.	Low The ZTV indicates that up to 19 poles of the New 132kV OHL may be visible from this listed monument in views across the relatively flat fields to the south and west of it. These fields contain some isolated trees, but these are unlikely to affect the level of visibility. The route of the New 132kV OHL that will be visible deviates from that of the Existing 132kV OHL, coming up to 350m west of the monument rather than staying on the opposite side of the M8. Here it appears to align with another existing OHL route that runs diagonally to the west of the monument. However, to the south of the monument the two OHL routes realign. The New 132kV OHL includes more supports than the Existing 132kV OHL, but they are shorter wooden poles as opposed to 20m high steel towers.	**Minor** The Blantyre monument is designed to be seen and the New 132kV OHL will be visible in conjunction with the monument in kinetic views when travelling along Golf Road to the west and the B815, which leads on to the Erskine Estate, to the south. Both of these roads are the main public accesses by which the monument may be seen. This setting change will add to the interruption and challenge that the existing nearby OHL and telephone poles make to the eye-catching design of the monument and its deliberate prominence in the landscape. It will not affect the legibility of the historical association with the Erskine Estate and lands. The effect on this aspect of the asset's heritage value is considered to be minor.
Richieston Cottages (category C)	Listing ref: LB10899	The C category listed Richieston Cottages are located to the north of the B815 in open countryside that is likely to have once formed part of the Erskine freehold, given that the Erskine Estate owned by the Blantyre Family lies approximately 140m to the north-east. In addition to which, the cottages were designed by William Burn, the same architect responsible for the nearby Blantyre monument. The four terraced single-story stone-built cottages date to the mid-19th century. Historic maps show that the cottages initially had three pathways leading from the road to a path leading across the front of the cottages, and then on to an outbuilding attached to the west elevation. A further outbuilding was located to the adjacent land parcel to the rear of the cottages. The eastern outbuilding was removed in the latter half of the 19th century, and a new track leading from the road to the rear outbuilding was created along the eastern side of the cottages. Not long thereafter the three pathways to the front of the cottages were replaced by a single central one, which remains today and leads to a hardstanding parking area, with a garage to the east. The outbuilding to the rear of the cottages appears to have survived – or been replaced – until the 1970s. It appears to have been replaced by rear gardens, which are visible on Google aerial imagery but not recent OS maps. Today the easternmost garden features two large outbuildings in it. See **plate 9.7** in **Appendix 9.2**	High This asset has high cultural value as a result of its architectural and historical interest. The former is derived from its aesthetic and design, and association with the notable architect William Burn. It also has some historical interest due to its probable association with the Erskine Estate.	Low The asset has an important historical and functional relationship with the road to the front of it and the former Erskine Estate. Parts of Erskine Park, such as the woodland shelter belts around Erskine Home Farm and Conyston plantation, remain legible today as part of the cottages setting, although the ability to experience them has been reduced by intervening trees and built development – including an existing OHL and telegraph poles - around the cottage's curtilage. These views are also interrupted by modern development along the edges of the former park (e.g. by the new golf club house and outbuildings surrounding Erskine Home Farm's east Cottage and store, another building which lay beyond Erskine Park). Otherwise, the cottages largely retain their open agricultural setting, which contributes to their architectural aesthetic and aids in the legibility of their function as rural dwellings.	Low The route of the New 132kV OHL will pass approximately 125m to the rear (north) of Richieston Cottages and 140m to the east, in views across the open agricultural fields, towards the former Erskine Park. This part of the route deviates from the Existing 132kV OHL but does appear to align with another existing OHL. Despite this, the New 132kV OHL will introduce a greater number of wooden poles into these views than are currently visible. Due to the screening provided around the cottages in-combination views with the New 132kV OHL will be largely limited to the west from Golf Road, and to the rear. An existing OHL and telegraph poles will also be visible in these views. Whilst the screening will also limit the ability to experience the New 132kV OHL from the cottages it is likely that it will be visible from the rear windows of the property and the back gardens.	**None** The material setting change resulting from the New 132 kV OHL will have a barely perceptible effect on the legibility of the historical and functional association with the former Erskine Park, the aesthetic contribution of the rural surroundings and the ability to understand the function of the cottages.

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
Old Bishopston House (now Cora House) (category B) and 133 Old Greenock Road (category C)	Listing ref: LB10901and LB10902	The category B listed Old Bishopston House is located on the southern side of the River Clyde and occupies a good defensive position with extensive views along the River. It comprises a two-storey L-plan tower house, probably of early 17th century date although it is considerably altered and includes later 19th -20th century additions. Early historic maps by Pont and Robert Gordon depict it as having planted parkland to the south, and later west. A U-shaped building is also depicted to the south-east of the house on historic mapping until the mid-19th century. The walled garden observed to the south-west of the building during the site visit does not appear to be shown on any of the historic maps. The only other surviving historic estate building is the category C gate-lodge (133 Old Greenock Road), located east of the drive off Greenock Road, is a single-storey stone-built structure built post-1923 to designs by the architects Harry Cook and Andrew Hamilton (of Paisley), who also designed the New Templar Halls in the Sneddon, Airdoch in Thornly Park and Lochfield Primary School. Old Bishopston house was originally the residence of the Brisbane family, who owned the lands of Bishopton, but over time passed through the hands of several high-profile Scottish families – the Walkinshaws, the Maxwell's and the Sempill's - before being sold to Robert Stewart, 11th Lord Blantyre, who lived at the nearby Erskine House, and absorbed into the Erskine estates. From the late 19th century onwards the house was extended and remodeled, being used as a farmhouse and then as a convent, with additional buildings, carparking and sports facilities being constructed in the grounds. Today the house and its grounds form the Good Shepard Centre, a specialist children's unit. See **plates 9.9** and **9.10** in **Appendix 9.2**	High The high cultural value of these two assets is derived from a combination of their architectural and historic interest and group value. In architectural terms the house is a good example of traditional severe Scottish architecture, albeit one which demonstrates an evolution of use, while the gate-lodge is a good example of the work by local architects Cook and Hamilton. In historic terms the age of the house, its social history, and association with a number of high-profile aristocratic families and the Erskine estate are all important to its interest.	Low to moderate Due to the changing use of the house and grounds over the years, much of the historic setting of the house in terms of associated estate buildings and landscaping has been lost. The house and lodge have an important historical and functional relationship. This may have once been appreciable visibly but there is now new development immediately south of the listed building interrupting the route of the driveway, and historic approach from where both assets could be experienced. There is also significant new development either side of the driveway entrance, which although screened from the main house by trees still affects the experience of entering the estate. The house and lodge are very well screened sitting within dense policy woodlands that obscure visibility to or from the buildings – except for the upper (attic) window on the west-facing gable of the main house. The house has further important relationships with the walled garden and designed landscape features to the south and east. The rural setting of the house and its grounds is also important, contributing to its legibility and aesthetic as a former high-status dwelling, with defensive aspects. A fact reiterated by its topographical siting and views over the Clyde. However, it is of note that the rural setting has been altered slightly by the development of the Inverclyde Railway a short distance to the north (rear) of the house in the 1840s. There is also some mature tree cover along the railway and the fields beyond, to the north of the building.	Negligible The route of the New 132kV OHL will pass approximately 1.2km to the side (west) and 210m to the rear (north) of Old Bishopton House. This is a deviation from the route of the Existing 132kV OHL, which run approximately 350m to the south of the property where it is screened by woodland. The introduction of the New 132kV OHL will not be apparent from the lodge which is surrounded by woodland and to the south of the house will run alongside the M8, behind the Inverclyde Railway, which is at this point, screened by trees. The New 132kV OHL will not be evident in-combination with the house and will only be visible from the upper attic storeys of the house and from the walled garden, to the south-west of the house and covered by curtilage listing. It will not interact with any designed views to/from the house and grounds and in views from the asset to the west, the OHL will be no closer than 1.2km – meaning that it will appear as a small and distant part of a much wider landscape view. See wireline **CH2** in **Appendix 9.2**	**None** The New 132kV OHL will not hamper understanding or appreciation of Old Bishopton House in its setting. Nor will it change the understanding or appreciation of the value of the house. While there will potentially be some visibility from outside the walled garden, the key relationships for this structure are with the house and designed landscape, less the wider rural setting beyond the estate walls. Although the New 132kV OHL will be visible in distant to views to the west, they will not affect the contribution that the rural setting makes to the value of the house (this being principally the internal relationships with its designed landscapes). In views from the asset over the Clyde, it is currently unclear whether the OHL will be visible as it is routed along the lower raised beach, parallel to the M8 and is extensively screened. Even where visible, the elevated position of Old Bishopton House ensures that while the viewer may be able to see the OHL (potentially along with railway infrastructure and the M8), it will not have a significant effect on the cultural value of the asset – these views mainly contributing an understanding of the asset's context, which will remain intact and readily appreciable.
Formakin GDL	Inventory ref: GDL00183	Formakin Estate was created in the early 20th century following the purchase of Millbank Farm by John A. Holms, an art collector and Glasgow businessman. Holms commissioned his friend, Sir Robert Lorimer, to design a new house as well as garden and park. Located at the centre of the Formakin Park on the site of an earlier farmhouse, is the now category A listed, Formakin House. Built to designs by the notable Scottish architect Sir Robert Lorimer it comprises a two-storey stone tower house of 16th -17th century style. Due to Holms losing his fortune, only the shell of the house was completed along with the landscaping of the park and garden and refurbishment of the other estate buildings. Sir Robert Lorimer also designed other listed buildings on the estate -the main entrance gateway and lodge and listed the tower bothy, both listed category B – and was also responsible for restoring the possibly 17th century millhouse, also listed category B. The estate gardens revived the traditions of walled gardens of the 17th century, and in terms of planting were influenced by the work of Gertrude Jekyll. There are remnants of gardens in four areas, around the house; the Bothy block and Mill House; and the derelict Paddockcraig and Gatehead House Only the gardens around the Bothy and the Mill House have been maintained and the exquisite detailing of the paths, gates, steps and walls all show the skill of Lorimer's design and workmanship.	High The high cultural value of the GDL is derived primarily from a combination of its artistic, historical, architectural and nature conservation value. ■ The artistic value of the site is derived from the layout and design of the grounds; ■ Its historical value lies in its association with three prominent figures: John A. Holms, Sir Robert Lorimer and Albert Pickard and their families and its ability to evidence an early 20th century country estate laid out in	Low The ability to experience the rural setting of the GDL from within the estate is limited due to its insular design and extensive historic shelter belts which surround the park to the east, south and west. The key area with external views to the rural setting are the agricultural fields to the north.	Negligible The route of the New 132kV OHL will pass approximately 130m to the west and north of the GDL, replacing the Existing 132kV OHL which currently runs through the GDL grounds. There are limited views in and out of the park itself and the New 132kV OHL is likely only to be seen from within the agricultural landscape of the northern policy, between the shelterbelts to the north-east and south-west. However, this is the area through which the Existing 132kV OHL is currently physically sited. The New 132kV OHL will also be perceptible in-conjunction with the	**None** The New 132kV OHL will be perceptible from the northern policy of the GDL, and in conjunction with the GDL in certain views (e.g. from the north-west). In these views the New 132kV OHL will be visible along with the wider rural landscape beyond the parkland. The effect of this on the contribution made to the value of the GDL will be barely perceptible and will not alter its legibility as a historical country estate.

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
		The policies divide into two parts: the southern area around the house is open parkland that contains a loch designed by Lorimer and the Old Mill pond and the northern section, which is mainly pasture, is enclosed by shelterbelts. The layout of the park reflects Lorimer's view that it should be informal and become increasingly more natural further away from the house. Following Holms death in 1938 the estate was purchased by Albert Pickard, a showman and millionaire philanthropist. However, it was then requisitioned during World War II meaning that maintenance ceased and gradually the gardens and grounds became overgrown becoming a haven for wildlife and is now a designated site of scientific interest (SSSI). In the late 1970s, proposals were drawn up to develop the estate for housing. However, the Local Authority, with the support of other public bodies mounted a campaign to save the estate for the nation and in 1984, Renfrew District Council purchased it with the help of a grant from the National Heritage Memorial Fund. Today, the landscape contains several notable architectural features, woodland, parkland, gardens and important wildlife areas. It is also of note that the Existing 132kV OHL to be removed as part of the EDM Project, runs through the western part of the GDL park, with two towers being sited within it. See **plate 9.11** in **Appendix 9.2**	a short ten year period and unchanged since then. ■ The architectural interest of the park is derived from the buildings it contains, which are of value due to their design by Sir Robert Lorimer, and their references of traditional Scottish vernacular traditions and highly distinctive architectural detailing. ■ The nature conservation of the site is derived from it its undisturbed pastures, woodlands and the silted water margins that provide habitats for a wide range of wildlife. In contrast, the GDL has little horticultural or scenic value, as minimal ornamental planting remains, and the park and woodland can only be seen from the minor roads which border the site. The contribution of archaeological interest has not been assessed by HES, but the Canmore data records an undated farmhouse, and two areas from which prehistoric flintwork comprising spearheads and a scraper were found. The western boundary of the park is also just 400m south of the Scheduled Whitemoss Roman Fort, which may have exerted influence over as much as a 1km area. Any potential remains of the former Millbank farmhouse have been built over by the Formakin House, and historic maps show some quarrying and terracing has taken place around the house, diminishing the potential for unknown remains in this area. Overall, then the archaeological potential of the site is unlikely to contribute to its heritage value		parkland in long range views of the park from the north-west – for example along the B789. Any other long range in-conjunction views are unlikely due to intervening built development and topography. See wireline **CH5** in **Appendix 9.2**	
'Cloak' (formerly 'Mosside'), Cloak Road (category B)	Listing ref: LB12462	Located in a secluded rural location overlooking Auchendores reservoir, the category B listed Cloak House is a large, two-storey, T-plan building. It was built in three phases for Hugh Brown Collins, proprietor of the Kelvindale Paper Works and member of the Kilmacolm Parish Council and the Lanark and Renfrew Hunt. The house is set within informal landscape gardens, enclosed by substantial boundary walls. Views towards the route options are heavily screened by intervening mature trees. The initial phase dates to 1906 and comprises a square plan cottage. In 1908, a south wing of Scottish tower house design was added and, in 1912, so too was a north wing of similar style. All three phases of work were undertaken to designs by internationally renowned Scottish architect Charles Rennie Mackintosh. Subsequent alterations to the building include a single-storey washhouse designed by the architect A. D. Hislop, which was added in or around 1926. In the late 1950s or early 1960s, several windows on the east front were removed, resulting in larger openings. Photographs of the interior (taken in 2014) indicate that Mackintosh's distinctive fireplaces with T-shaped openings, and built-in bedroom wardrobes and cupboards are retained. See **plate 9.12** in **Appendix 9.2**	High The high cultural value of Cloak derives primarily from its architectural interest as a well-preserved and highly unusual example of Charles Rennie Mackintosh's work, standing out amongst his repertoire as being of simple vernacular character.	Low Cloak's rural setting and commanding views contribute to the aesthetic of the house and its legibility as higher status country residence that references both vernacular domestic and defensive traditions. However, these views are not towards the New 132kV OHL making its sensitivity to the EDM Project low.	Negligible The New 132kV OHL will be routed approximately 150m to the south and south-east – the rear and side - of the house. Due to the route passing through woodland by Leperstone Reservoir, there will be some loss of trees in addition to the introduction of the OHL. The introduction of the New 132kV OHL will make little material change to the landscape character as the route follows that of the Existing 132kV OHL, which it will effectively replace. The New 132kV OHL will be perceptible in long-distance views of Cloak House from Finlaystone Road, across Auchendores Reservoir. In these, they will be clearly set back from	**None** The introduction of the New 132kV OHL will result in a barely perceptible material change to the rural character of the landscape and will not affect the way in which it contributes to Cloak House's aesthetic and legibility as higher status country residence.

Asset name	Asset reference	Description	Value	Sensitivity (to setting change only)	Magnitude of change	Significance of effect (also residual significance of effect)
					the house behind the woodland that surrounds it. Due to the woodland screening it will not be possible to experience the New 132kV OHL from the house itself, and its commanding views will remain unchanged.	

Proposed Additional Mitigation

9.95 There is no mitigation required in relation to the predicted operational setting effects which are not significant.

Residual Operational Effects

9.96 The design of the New 132kV OHL has sought to avoid and minimise operational effects to cultural assets. Consequently, the residual operational effects are the same as those reported in **Table 9.10.**

Decommissioning of Existing 132kV OHL

9.97 The activities required for the decommissioning and removal of the Existing 132kV OHL is detailed in **Chapter 4: Project Description**. In summary, potential direct physical effects may arise from the removal of the steel towers and associated temporary decommissioning infrastructure i.e. access tracks.

9.98 Steel tower removal will involve attaching a steel bond wire between the earth wire peak and a mobile winch (typically attached to a tractor) after which the steel legs of the tower will be cut (using a disc saw) above the concrete foundations. The tractor winch will then be used to fell the tower in a controlled manner. Towers will be cut into sections on the ground and removed from site. Foundations are removed to a minimum depth of one metre below ground level. This work is undertaken using a tracked excavator which will dig around the concrete 'muff' to a depth of approximately 1m. The excavator will then be used to break the concrete around the steel 'raker' bar within the concrete. All concrete will then be removed from the excavation and the remaining steel raker bar cut with a disc saw to a depth of approximately 1m. This action will be repeated for the remaining tower legs. Following this step, the area will be cleared and the ground reinstated to its former use.

9.99

9.100 The method of working within the Scheduled Monument will comprise installation of trackway to facilitate access/egress and work areas adjacent to the towers, laying of protective matting and/or tractor towers around the tower, removal of cross-arms from towers, attaching the tower to a tractor and winch, cutting of the steel tower legs and pulling the tower onto the matting. Cutting up of the tower in situ and transport offsite.

9.101 Decommissioning effects have only been identified in relation to two assets, both of which are designated. The effects to these assets are assessed below in **Table 9.11** below. Unless stated otherwise, all effects are permanent and negative. This table also includes proposed additional mitigation and assessment of the residual effects.

Table 9.11: Decommissioning Effects

Asset name	Asset reference	Description	Value	Magnitude of change	Significance of effect	Mitigation	Residual effect
Whitemoss Roman Fort	Schedule ref: SM1652	Well-preserved archaeological remains of a Roman Fort forming part of the western arm of the Antonine defences. See **Table 9.11** Above for more detail	High Primarily derived from its intrinsic characteristics See **Table 9.11** above for more detail	**Physical** Negligible to Minor Detrimental physical change has already occurred to the fort as a result of the installation of the two Existing 132kV OHL towers within it. The proposed methodology for the removal of the towers means that there should be no physical effects as a result of access. However, the breaking out of the concrete bases may result in the loss/ damage of the surrounding archaeological deposits (although the findings of the watching brief during previous tower foundation works proved negative).	**Physical** **Minor (negative)** The removal of the two steel towers could result in a Minor adverse effect to the heritage value of the fort, as a result of the partial loss of its intrinsic characteristics during the breaking out of the concrete bases.	A watching brief should be undertaken during works on the Scheduled Monument. Additionally, rather than being broken out, the steel tower concrete foundations will be left in-situ following the removal of the towers to avoid any adverse physical effects to underlying, in situ archaeological remains. SPEN is aware of the need to apply for SMC prior to any works being undertaken to the Existing 132kV OHL sited within this monument and anticipate that it will be conditioned on to the S37 consent. SPEN will apply for SMC which as a minimum, will include: ■ a written description of the proposed works ■ the name or location of the Scheduled Monument to which the works relate, or a description of the location of the land ■ the name and address of the applicant and, if appropriate, the name and address of the agent acting for the applicant ■ a plan or drawing sufficient to identify the area of land to which the works relate ■ any other plans and drawings necessary to describe the works in full ■ appropriate ownership certificates and notices – Other Parties Notification, if necessary, and Certificate of Ownership.	**Physical** **None** Leaving the concrete bases in-situ will avoid any adverse physical effects to the intrinsic characteristics of the fort. A watching brief would minimise/ off-set the effect of any physical damage by recording and understanding the value of any archaeological deposits affected.
				Setting Minor The removal of the towers will improve the setting of the monument and the views/ legibility of its defensive relationships	**Setting** **Minor (beneficial)** In contrast, the removal of the towers would have a Minor beneficial of the setting of the asset, allowing for a better appreciation of its key relationships.	**Setting** N/A	**Setting** **Minor (beneficial)** The removal of the Existing 132kV OHL towers would result in a minor beneficial effect by enabling a better appreciation of the assets key setting relationships and views.

Asset name	Asset reference	Description	Value	Magnitude of change	Significance of effect	Mitigation	Residual effect
Formakin GDL	Inventory ref: GDL00183	An early 20th century designed landscape containing multiple listed buildings See **Table 9.11** Above for more detail	High The high cultural value of the GDL is derived primarily from a combination of its artistic, historical, architectural and nature conservation value. See **Table 9.11** Above for more detail	Minor The two Existing 132kV OHL steel towers in the GDL stand within the northern policy, which is comprised of agricultural land that contributes to the artistic value of the GDL. Due to the use of LGP vehicles and matting no harm should arise to these fields as a result of the proposed works.	**Minor (beneficial)** The removal of the two steel towers from the northern part of the park will have a minor beneficial effect by restoring the area to its original naturalistic design and better allowing the appreciation of this design.	None required.	**Minor (beneficial)** – as a result of the steel tower removal which negatively affect the naturalistic design of the GDL and the appreciation of this design.

Interrelationship between Effects

9.102 Intra-project effects are defined as individual effects which may combine to have a total effect on an individual receptor. However, indirect effects on sites or features of national, regional or local cultural heritage value as a consequence of vibration, dewatering or changes in hydrology have been scoped out of the assessment on the basis that they are unlikely to arise and will not be significant.

Further Survey Requirements and Monitoring

9.103 Watching briefs will be required where physical effects to non-designated heritage assets have been identified as requiring a programme of recording (outlined in **Appendix 9.3**) and during the excavation of the New 132kV OHL poles located in areas of archaeological potential.

9.104 SMC will be required prior to any development at the Scheduled Whitemoss Roman Fort and during the decommissioning of the Existing 132kV OHL a watching brief will be required.

9.105 There is no requirement for any post-construction field surveys or monitoring.

Summary of Significant Effects

9.106 No significant effects are predicted in relation to cultural heritage as a result of the EDM Project.

[i] Historic Environment Scotland (2016) *Managing Change in the Historic Environment Guidance Notes – Setting*
[ii] https://www.inverclyde.gov.uk/planning-and-the-environment/planning-policy/conservation/archaeology
[iii] http://portal.historicenvironment.scot/spatialdownloads
[iv] http://portal.historicenvironment.scot/search
[v] https://canmore.org.uk/content/data-downloads
[vi] http://www.renfrewshire.gov.uk/article/2486/Listed-Buildings-and-Conservation-Areas and https://www.inverclyde.gov.uk/planning-and-the-environment/planning-policy/conservation/conservation-areas
[vii] https://hlamap.org.uk/
[viii] https://www.geos.ed.ac.uk/~ajn/spad/
[ix] https://maps.nls.uk/
[x] https://www.scottishheritagehub.com/node/1203
[xi] https://remotesensingdata.gov.scot/
[xii] Historic Environment Scotland (2019) *Historic Environment Policy for Scotland* (HEPS), pp. 5
[xiii] Historic Environment Scotland (2019) *Designation Policy and Selection Guidance.*
[xiv] Historic Environment Scotland (2016) Managing Change in the Historic Environment Guidance Notes – Setting
[xv] Historic Environment Scotland (2019) *Designation Policy and Selection Guidance*
[xvi] Historic Environment Scotland (2016) *Managing Change in the Historic Environment Guidance Notes – Setting*
[xvii] Historic Environment Scotland (2019) *Designation Policy and Selection Guidance*
[xviii] https://remotesensingdata.gov.scot/
[xix] Hallifax-Crawford, A (1967b) 'Barbeg near Langbank', in *Discovery and Excavation Scotland, pp. 47*