

Chapter 9

Cultural Heritage

9 Cultural Heritage

Introduction

- 9.1 This chapter considers the potential effects of the proposed development¹ on cultural heritage (historic environment sites and features, archaeology and built heritage); hereafter referred to as 'heritage assets'. It details the results of a desk-based assessment and field survey based on data and information provided by Historic Environment Scotland (HES) and by D&GC.
- 9.2 This chapter should be considered in conjunction with the following chapters which inform or have been informed by this assessment:
- **Chapter 4: Project Description and Construction, Operation and Maintenance** which provides details of the proposed development;
 - **Chapter 5: Planning Policy Context** which details the planning policies and guidance relevant to this assessment; and
 - **Chapter 6: Landscape and Visual Amenity** which details the effects of the proposed development on landscape and visual amenity as described further below.
- 9.3 The Cultural Heritage Assessment has been prepared by CFA Archaeology Ltd, a Chartered Institute for Archaeologists (CIfA) Registered Organisation (RO) based in Musselburgh, East Lothian.
- 9.4 The assessment has been carried out in accordance with the Chartered Institute for Archaeologists 'Code of Conduct' (CIfA 2017) and 'Standard and Guidance for Historic Environment Desk-based Assessment' (CIfA 2014).
- 9.5 The assessment is supported by **Figures 9.1 to 9.2**.
- **Figure 9.1**² shows the layout of the Glenlee substation extension together with the heritage assets identified within the proposed site boundary (the site). Descriptions of these assets are provided in **Table 9.9**.
 - **Figure 9.2**³ shows the location and extent of heritage assets within 1km of the centre of the Glenlee substation extension itself ("the 1km Outer Study Area") and a list of those external receptors together with an assessment of the predicted effects on their settings is detailed in **Table 9.10**.
- 9.6 Effects on landscape and visual amenity in relation to certain heritage assets are addressed separately in **Chapter 6: Landscape and Visual Amenity**.

Scope of the Assessment

- 9.7 As detailed in **Chapter 2: Approach to the EIA**, potential effects arising from the then proposed Glenlee substation extension were originally included in the Scoping exercise associated with the KTR Project (April 2017). SPEN subsequently agreed with D&GC that additional scoping for the proposed development as a standalone project would not be necessary.
- 9.8 In the absence of formal Scoping Opinion, but in addition to the wider scoping exercise for the KTR Project, the scope of this chapter has been determined through the findings of desk study and survey work, consultation specific to the proposed development, the professional judgement of the EIA team, and SPEN's experience from other projects of a similar nature.

¹ The 'proposed development' includes the Glenlee substation extension (as outlined in green on figure 4.1) together with all associated works to be undertaken within the planning application site boundary as detailed within paragraphs 4.1-4.19 of Chapter 4 unless the context indicates otherwise

² Data from HES.

³ Data from HES.

Effects Assessed in Full

- 9.9 The assessment is based on the proposed development as described in **Chapter 4: Project Description and Construction, Operation and Maintenance**. The specific objectives of the assessment were to:
- identify the cultural heritage baseline within and in the vicinity of the site;
 - assess the site in terms of its archaeological potential;
 - consider the effects of the proposed development on heritage assets, within the context of the relevant legislation and planning guidance; and
 - propose mitigation measures, where appropriate, to address likely impacts.
- 9.10 The assessment considers the potential direct effects (construction impacts) on assets within the site and the effects of the proposed development on the setting of designated and non-designated heritage assets in the wider landscape.
- 9.11 There are no World Heritage Sites, Scheduled Monuments, Inventory status Gardens and Designed Landscapes, Conservation Areas, Inventory status Historic Battlefields or Archaeologically Sensitive Areas within the 1km Outer Study Area. Beyond 1km, the completed substation extension, being in addition to the existing hydro power station infrastructure, will not be a prominent new feature in the landscape and the effect on the settings of heritage assets beyond 1km will not be significant.
- 9.12 The following key issues were identified through consultation with HES and D&GC for consideration in the assessment:
- direct effects during construction on heritage assets (archaeological features) within the site; and,
 - indirect effects during operation on the setting of heritage assets (Listed Buildings and Non-Inventory Designed Landscapes) within the 1km Outer Study Area.

Effects Scoped Out

- 9.13 On the basis of the desk-based and field survey work undertaken, the professional judgement of the EIA team and experience from other relevant projects, the following topic areas have been 'scoped out' of detailed assessment:
- Effects on setting during construction (including from the access track, compound areas and topsoil storage); these will be temporary features, lasting for the duration of the construction works only and the ground will ultimately be reinstated to improved pasture once the substation extension is operational. Effects arising from these elements will result in only short-term / low magnitude and not significant effects on the setting of cultural heritage assets in close proximity to the Glenlee substation extension and will have no permanent or significant effects.
 - Effects on setting from the upgrading along the site access road; the upgrading works will only require minor changes to the existing road alignment (construction of passing places) and there will be no adverse effects on the setting of heritage assets with statutory or non-statutory designations in the wider landscape.

Assessment Methodology

Legislation and Guidance

Legislation

- 9.14 This assessment is carried out in accordance with the principles contained within the following legislation:
- Ancient Monuments and Archaeological Areas Act 1979ⁱ;
 - Planning (Listed Buildings and Conservation Areas (Scotland) Act 1997 (as amended by Historic Environment Scotland (Amendment) (Scotland) Act 2011)ⁱⁱ; and
 - Town and Country Planning (Environmental Impact Assessment (Scotland) Regulations 2017ⁱⁱⁱ.

Guidance

- 9.15 This assessment is carried out in accordance with the principles contained within the following documents:
- Historic Environment Policy for Scotland (HEPS) (2019)^{iv};

Scottish Planning Policy (SPP) (2014)^v;

Planning Advice Note 2/2011: Planning and Archaeology (PAN2/2011)^{vi};

Dumfries and Galloway Council Local Development Plan (LDP) 2014^{vii}; and

HES Managing Change in the Historic Environment: Setting^{viii}.
- 9.16 Relevant policies for cultural heritage interest in the LDP (Volume 1: Policies) applicable in the case of the proposed development are:
- Policy OP1: Development Considerations;

Policy HE1: Listed Buildings;

Policy HE3: Archaeology; and

Policy HE6: Gardens and Designed Landscapes.

Consultation

- 9.17 Consultation was undertaken with HES and D&GC to obtain approval regarding the assessment methodology to be adopted in the EIA and to invite comment on historic environment issues in respect of the proposed development. A summary of the responses is provided in **Table 9.1**.

Table 9.1: Consultation Responses

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Historic Environment Scotland (10 th June 2019)	Consultation regarding assessment methodology	HES confirmed that they were content with the proposed 1km Outer Study Area for assessment of impacts on setting of heritage assets.	The indirect impacts of the proposed development on designated heritage assets are assessed in Table 9.9 and Paragraphs 9.72-9.78 .
Dumfries and Galloway Council (28 th May 2019)	Consultation regarding assessment methodology	Confirmed that they were content with the proposed 1km Outer Study Area for assessment of impacts on setting of heritage assets.	The indirect impacts of the proposed development on designated heritage assets are assessed in Table 9.9 and Paragraphs 9.72-9.78 .
		Welcomed that test-pitting investigation will be carried out prior to construction within the site to establish the extent, date and function of any surviving remains of the bloomery/metal working site (Asset no 4) as an initial phase of mitigation.	Mitigation to reduce/offset effects on cultural heritage assets is set out in Paragraphs 9.64-9.69
		Noted that a watching brief or full excavation will be required if the test-pitting investigation uncovered archaeological remains.	Mitigation to reduce/offset effects on cultural heritage assets is set out in Paragraphs 9.64-9.69 .

Study Area

- 9.18 Two study areas were used for the assessment:

- The Inner Study Area (**Figure 9.1**): the site, as outlined in red, forms the study area for the identification of heritage assets that could be directly affected during the construction of the proposed development. The current land-use of this area is improved pasture. **Figure 9.1** shows the site, the layout of the Glenlee substation extension itself, and the locations of the heritage assets identified.
- An Outer Study Area (**Figure 9.2**): the 1km Outer Study Area was used for the identification of heritage assets whose settings may be affected by the proposed development (external receptors). The 1km Outer Study Area was agreed through consultation with HES and D&GC as being appropriate. **Figure 9.2** shows the Glenlee substation extension and temporary works areas, together with the location of heritage assets within the 1km Outer Study Area. The upgrading works along the access road (A762) will require only minor changes to the existing road alignment and there will be no adverse effects on the setting of heritage assets with statutory or non-statutory designations in the wider landscape. The site access road is therefore not included in the assessment of effects on setting.

Desk Based Research and Data Sources

- 9.19 The following information sources were consulted as part of the desk-based assessment work:
- Historic Environment Scotland Spatial Data Warehouse (HES 2019a^{ix}): provided up-to-date data on the locations and extents of Scheduled Monuments, Listed Buildings, Conservation Areas, Inventory status Garden and Designed Landscapes, Inventory status Historic Battlefields and World Heritage Sites.

Dumfries and Galloway Council Historic Environment Record (HER): provided a digital database extract in GIS for all assets within 1km of the Site⁴.

The Historic Environment Scotland database (Canmore) (HES 2019b^x): for any information additional to that contained in the HER.

Map Library of the National Library of Scotland: for Ordnance Survey maps and other historical map resources.

Historic Land-Use Assessment Data for Scotland (HLAMap) (HES 2019c^{xi}): for information on the historic land use character of the site and the surrounding area.

Scottish Palaeoecological Archive Database (SPAD) (Coles et al. 1998^{xii}): records the distribution of known sites across Scotland, was consulted for information on sites with palaeoenvironmental and palaeoecological potential.

Relevant bibliographic references: to provide background and historic information.

Field Survey

- 9.20 Field survey of the substation extension site was undertaken on 21st June 2017⁵. Conditions at the time of the survey were good, with dry ground conditions and bright sunshine. The aims of the field survey were to:
- assess the baseline condition of the known heritage assets identified through the desk-based assessment that may be affected by the proposed development;

identify, where possible, any further features of cultural heritage interest not detected through desk-based assessment; and

identify areas with the potential to contain currently unrecorded buried archaeological remains.
- 9.21 A site visit was also undertaken, on the same day to assess the character and sensitivity of the settings of heritage assets in the 1km Outer Study Area. Access to Glenlee Park was not possible as this is a private house and gardens; therefore publicly accessible locations as close as possible to the house were visited as a basis for the assessment.

⁴ 1km from the centre point of the substation extension.

⁵ The site visit only included the area of the Glenlee substation extension and temporary works itself but did not include a survey of the access. This is detailed further in paragraph 9.36.

Assessing Significance

9.22 The effects of the proposed development on heritage assets have been assessed on the basis of their type (direct effects, effects on setting and cumulative effects) and their nature (beneficial, neutral or adverse). The assessment takes into account the sensitivity of the heritage asset and its setting and the magnitude of the predicted effects.

Sensitivity

9.23 The sensitivity of heritage assets has been determined on the basis of the relative weight given to them in SPP and, where relevant, taking account of the level of importance attributed to assets in the D&GC HER. **Table 9.2** summarises the relative sensitivity of those heritage assets and the appropriate level of sensitivity (and attributed importance) is included in **Tables 9.9** and **9.10**.

Table 9.2: Sensitivity of Heritage Assets

Sensitivity of Asset	Description
High	Sites of national importance, including: Scheduled Monuments and sites proposed for scheduling Category A Listed Buildings Gardens and Designed Landscapes (Inventory) (GDL) Historic Battlefields (Inventory)
Medium	Sites of regional importance, including: Archaeological sites and areas of distinctive regional importance Undesignated archaeological assets and features identified in D&GC Historic Environment Records (HER) as non-statutory register (NSR) sites ⁶ Category B Listed Buildings Conservation Areas Non-Inventory Designed Landscapes ⁷ (NIDL) Archaeologically Sensitive Areas ⁸ (ASA)
Low	Sites of local importance, including: Archaeological sites of local importance Category C Listed Buildings Unlisted buildings and townscapes with local (vernacular) characteristics
Negligible	Sites of lesser (little or no) importance, including: Find-spots (where the artefacts are no longer in situ and where their provenance is uncertain) Unlisted buildings of minor historic or architectural interest Poorly preserved examples of particular types of features (e.g. quarries and gravel pits, dilapidated sheepfolds, etc)

Magnitude

9.24 The magnitude of change has been assessed according to the criteria set out in **Table 9.3**.

Table 9.3: Magnitude of Change

Level of magnitude	Definition
High	A fundamental material change to the baseline condition (or setting) of the heritage asset, leading to total or major alteration of character (or setting)
Medium	A material, partial alteration of character (or setting)
Low	Slight, detectable alteration of the baseline character (or setting) of the heritage asset
Imperceptible	A barely distinguishable change from baseline character (or setting)

Significance of Direct Effects

9.25 The predicted significance of direct effects, which measures the degree of change to the baseline condition of a feature that will result from the construction of one or more elements of the proposed development, was determined using the matrix presented in **Table 9.4**. Where no effect will arise, either as a result of design mitigation to avoid impacts on heritage assets, or through the application of construction phase mitigation to mark-off heritage assets for avoidance, the result will be 'no effect', categorised where applicable in the following text as 'None'.

Table 9.4: Significance of Direct Effects

Magnitude of Effect ▼	Sensitivity of Heritage Assets ►			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	None
Low	Moderate	Minor	None	None
Imperceptible	Minor	None	None	None

Significance of Effects on Setting

- 9.26 Historic Environment Scotland’s guidance document ‘Managing Change in the Historic Environment: Setting’ (HES 2016^{xiii}) notes that:
- “Setting is the way the surrounding of a historic asset or place contributes to how it is understood, appreciated and experienced. It can often be integral to a historic asset’s cultural significance. Setting often extends beyond the property boundary or ‘curtilage’ of an individual historic asset into a broader landscape context.”*
- 9.27 The guidance also advises that:
- “If a Proposed Development is likely to affect the setting of a cultural heritage asset, an objective, written assessment should be prepared by the applicant to inform the decision-making process. The conclusions drawn should take into account the significance of the historic asset and its setting and attempt to quantify the extent of any detrimental impact. The methodology and level of information should be tailored to the circumstances of each case”.*
- 9.28 For each asset where a potential effect on setting has been identified, the assessment of possible effects has adopted a four-stage approach:
- identification of the characteristics of the setting of the asset;
 - assessment of the sensitivity of that setting;
 - identification of how the presence of the Glenlee substation extension will affect that setting (magnitude of effect); and
 - assessment of significance of effect.
- 9.29 The sensitivity of an asset’s setting has been assessed by considering two factors:
- the relative weight which statute and policy attach to the asset and its setting (**Table 9.2**); and
 - the degree to which the baseline setting contributes to the understanding and/or appreciation, and hence value, of the asset (**Table 9.5**).

⁶ NSR sites were identified in some Local Authority areas through a Historic Scotland (now HES) funded project in the 1980s. In most cases the designations have not been verified by further field inspections and HES does not rely on such designations when selecting sites for scheduling. Nevertheless, it is recognised that such designations denote potentially important archaeological sites and features and that they should be considered to be important assets. In recognition of this, assets with such designations (whilst they have no statutory protection equivalent to Scheduled Monuments) are considered in the assessment as being of regional importance and medium heritage value.

⁷ D&GC holds lists of Non-Inventory Gardens and Designed Landscapes (NIDL). These are parks, gardens and designed landscapes which do not qualify for inclusion in the Inventory of Gardens and Designed Landscapes in Scotland but which are of regional/local interest. Their designation is non-statutory in effect but they are provided for under Dumfries and Galloway Council Local Development Plan Policy HE6

⁸ Archaeologically Sensitive Areas (ASA) are a designation within Dumfries and Galloway that came about during preparation of an Indicative Forestry Strategy in the 1990's. ASAs were designated in the D&GC Structure Plan under Policy E13. The designation of ASAs is at the regional/local level and is non-statutory in effect.

Table 9.5: Contribution of Setting to Understanding and Appreciation of a Heritage Asset

Contribution	Definition
High	A setting which makes a strong positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of an asset. E.g. a prominent topographic location; surroundings that include related monuments in close association; surroundings that are believed to be little changed from those when the asset was created.
Moderate	A setting which makes some positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of an asset. E.g. surroundings that complement the siting and appearance of an asset, such as the presence of a feature of the rural past within a more recent farming landscape containing little or no urban or industrial development.
Low	A setting which makes little positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of an asset. E.g. where surroundings only partially complement the siting and appearance of an asset, such as the presence of a feature of the rural past within a partly urbanised or industrialised landscape.
Negligible	A setting which does not contribute positively to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of an asset. E.g. immediate surroundings, such as of a commercial coniferous single species woodland or industrial development, that are not relevant to understanding the context of the asset.

- 9.30 The sensitivity of the asset (**Table 9.2**) and the contribution that its setting makes to understanding and/or appreciation of the asset (**Table 9.5**) are combined to assess the overall sensitivity of its setting, using the matrix set out in **Table 9.6**.

Table 9.6: Sensitivity of Setting of a Heritage Asset

Sensitivity of Asset ▼	Contribution of Setting ►			
	High	Moderate	Low	Negligible
High	High	High	Medium	Low
Medium	High	Medium	Low	Low
Low	Medium	Medium	Low	Low

- 9.31 Where it has been determined that the setting of a heritage asset is such that there is no potential for it to be affected by the presence of the proposed development (including all assets of negligible sensitivity), the asset is not considered further in the assessment. For the remaining assets, the magnitude of effect on setting was assessed according to the thresholds set out in **Table 9.2** and the significance of the predicted effect is assessed using the matrix presented in **Table 9.7**.

Table 9.7: Significance Matrix for Effects on Setting

Magnitude of Effect ▼	Sensitivity of Setting ►		
	High	Medium	Low
High	Major	Moderate	Minor
Medium	Moderate	Moderate	Minor
Low	Minor	Minor	None
Imperceptible	None	None	None

Significance Criteria

- 9.32 The significance of effects is classified as Major, Moderate, Minor or None, as defined in **Table 9.8**.
- 9.33 Major and Moderate effects are considered to be significant in the context of the EIA Regulations.

Table 9.8: Significance Criteria

Significance of Effect	Description
Major	A change to the baseline condition or setting of an asset that leads to a substantial effect on the character, quality or context of an asset.
Moderate	Changes to the baseline condition or setting of an asset that lead to a material impact on the character, quality or context of an asset.
Minor	Changes to the baseline condition or setting of an asset that lead to a detectable but non-material change impact on the character, quality or context of an asset.
None	Changes to the baseline condition or setting of an asset that lead, to, at most, a negligible impact on the character, quality or context of an asset.

Criteria for Assessing Cumulative Effects

- 9.34 The assessment of cumulative effects on heritage assets has been based upon consideration of the effects of the proposed development on the settings of assets with statutory and non-statutory designations within the 1km Outer Study Area in addition to the likely effects of other operational, consented and in planning developments. Any proposed developments at the scoping or pre-application stage have not been included in the assessment; as such proposals are not fully formed and may be subject to changes that cannot be foreseen.

Assessment Limitations

- 9.35 The assessment has been carried out using data derived from HES’s Spatial Warehouse and from the D&GC HER and other sources (historic maps, aerial photographs). It is assumed that, at the time of the acquisition of the data, the information provided was accurate and up-to-date. It is considered that the data obtained is sufficient to provide a reliable assessment of the archaeological baseline of the site and that the information has been sufficient to allow a proper assessment of the potential effects of the proposed development on cultural heritage resources.
- 9.36 No field survey has been undertaken along the site access road (A762). A desk-based assessed (detailed above in Paragraph 9.19) was carried out for the site access road. The assessment relies on the accuracy of the existing records and the desk-based work undertaken. Given the limited land-take of the proposed public road upgrade works along the site access road it is considered that the information gained through the desk-based assessment has been sufficient to allow a proper assessment of the potential for likely effects from the proposed works.
- 9.37 Limitations were encountered in respect to access to Glenlee Park which is a private house and gardens, however, publicly accessible locations as close as possible to the house were visited as a basis for the assessment. It is considered that the information gained during the site visit has been sufficient to allow a proper assessment of the potential for likely effects of the proposed development on the setting of Glenlee Park.

Existing Conditions

General

- 9.38 11 sites of cultural heritage interest have been identified within the site. The locations and extents of these are shown on **Figure 9.1**, and **Table 9.9** provides detailed gazetteer information on their character and baseline condition.
- 9.39 Numbers in brackets in the following sections, refer to asset numbers depicted on **Figure 9.1**, and listed in **Table 9.9**.

Heritage Assets within the Inner Study Area

Designated Heritage Assets

- 9.40 There are no Scheduled Monuments within the site, and no part of the Glenlee substation extension lies within a World Heritage Site, Inventory status Garden and Designed Landscape, Inventory status Historic Battlefield, or Conservation Area.

- 9.41 Two Listed Buildings, Category B Listed Glenlee hydro power station and associated bridge (LB9736) and Category B Listed Earlstoun hydro power station (10a; LB9275) stand adjacent to the site. These rectangular plan power stations date to the early 20th century (1934) and are an integral part of Phase 1 of the Galloway hydro power scheme. The power stations and bridge are of regional heritage importance and medium sensitivity. A road bridge (10b) adjacent to Earlstoun hydro power station (10a) and crossing the tailrace for the power station is also recorded as being listed as part of the power station in the HES database, but it is not specifically noted in the listing for the power station (HES Designation Portal). As an integral feature of the power station it is considered to be of medium sensitivity.
- 9.42 One Listed Building, Category C Listed Coom Bridge (7; LB9724), carries the current A962 public road over the Coom Burn near Glenlee. This early 19th century stone bridge is of local heritage importance and low sensitivity.

Non Designated Heritage Assets: Prehistoric

- 9.43 The HER and Canmore entries record that several flint flakes, blades and microlithics (8), of probable Mesolithic date, have been discovered in plough-soil and mole hills of a terrace to the east of the Water of Ken. These recorded find-spot locations and the artefacts described are no longer in situ. They are accordingly assessed as being of little heritage importance and negligible sensitivity. However, it is recognised that they are indicative of the possibility that associated archaeological remains may survive in the vicinity and are indicative of an archaeological potential in these areas.
- 9.44 **The HER entries record that the 'Site of' two prehistoric burial cairns (6 and 9) are depicted on the** Ordnance Survey 1st Edition map (1853), to the east of the A762 public road. The cairn sites are, however, not shown on the 2nd Edition map (1895). No upstanding remains of these former burial cairns are visible on modern aerial photographs (GoogleEarth™). A modern steel lattice electricity overhead line tower has been erected at the location of one former cairn (6), and the area in which cairn (9) is shown on historic maps now consists of flat improved pastureland. There is, however, some potential for associated buried remains to survive within these areas and accordingly the former cairn sites are assessed as being of low sensitivity.
- 9.45 Iron working residue (4) has been found in the 1970s to have washed out of the bank of a small burn near Court Hill (Ansell 1974^{xiv}) and to have been exposed on the bed and banks of a small stream just south of Glenlee hydro power station. The recovery of iron working debris from this area has been taken as evidence to suggest the possible presence of a bloomery (primitive metal working/smelting site) in the area. The site is currently assessed as being of unknown sensitivity, as its character and condition are currently poorly understood. However, if buried remains do survive and can be shown to be the remains of an early (prehistoric or medieval) bloomery then it would be considered to be a heritage asset potentially of regional heritage importance and medium sensitivity.

Non Designated Heritage Assets: Medieval or Later Settlement

- 9.46 Glenlee Park Non-Inventory Designed Landscape (NIDL) (5) lies adjacent to the site. The NIDL forms the setting for Category B Listed Glenlee Park (LB9737) and other associated Listed Buildings/structures including a bridge (LB9738); a steading (LB9739); a sarcophagus (LB9741), and an urn and pedestal (LB9740), which are located over 200m south of the Site. The designed landscape consists of small blocks of woodland that surround the Listed Buildings and small areas of parkland on the periphery of the designed landscape. The NIDL is identified as regionally significant by D&GC and considered to be of medium sensitivity.

Non Designated Heritage Assets: 20th Century Buildings

- 9.47 Two structures associated with the Glenlee hydro power station (LB9736), are present within the site: Glenlee hydro power station pipeline (the penstock) (1) and Glenlee hydro power station transformer station (2). In addition, a second transformer station (11) associated with Earlstoun hydro power station stands just west of the A762 public road. As integral elements of the original hydroelectric power stations they are of local heritage importance and low sensitivity.
- 9.48 A Second World War air raid shelter (3) lies at the eastern edge of the site. Field survey recorded that the air raid shelter is built into a north-east facing slope and all that is visible is a door and concrete lintel set into the slope with a retaining wall running along the northern edge of the slope. The air raid shelter itself is covered in scrubby woodland. A farm access track leading to farmland alongside the Glenlee hydro power station passes the air raid shelter on its north side. As a well-preserved air raid shelter it is considered to be of regional heritage importance and medium sensitivity.

Archaeological Potential of the Site

- 9.49 On historic maps (Roy 1747-55^{xv}), the location of the site is shown to be unenclosed cultivated land. In the mid-19th century it is depicted, on the Ordnance Survey 1st Edition map (1853^{xvi}), as enclosed fields. The current land-use is improved grazing pasture.
- 9.50 No upstanding features of archaeological interest survive within the proposed substation area, but the discovery of metalworking debris (4) suggests that there is a high potential for further metal working finds and associated features to survive as buried remains / deposits within this area.
- 9.51 The recovery of prehistoric lithics (8) from terraces to the east of the Water of Ken and the records of two former prehistoric burial sites (6 and 9), north of Glenlee, suggests that there is a high potential for further prehistoric finds and deposits to survive within farmland either side of the A762 public road. Given the limited land-take required for upgrading works (construction of passing places) along the proposed site access road, the probability of encountering hitherto undiscovered sites of archaeological significance during construction works is considered to be low.

Table 9.9: Cultural Heritage Assets within the Inner Study Area

Asset no	Asset name	HER no / Canmore no	Easting	Northing	Source(s)	Asset description	Heritage sensitivity
1	Glenlee Hydro Power Station; Pipeline	MDG22076 / 275884	260599	580543	HER; Canmore; Field survey	The HER and Canmore entries record the pipeline for Glenlee hydro power station. This pipeline carries the water from the tunnel from the first anchor block (NGR 260285 580266) to the second anchor block (NGR 260540 580495). The pipeline is still in use.	Low
2	Glenlee Hydro Power Station, Transformer Station	MDG22115 / 276571	260643	580521	HER; Canmore	The HER and Canmore entries record the presence of Glenlee hydro power station transformer station. No further details are provided. The transformer station is still in use.	Low
3	Glenlee, Air Raid Shelter	MDG21321	260689	580391	HER	The HER entry records that an air shelter is depicted on the 2000 1:1,250 Ordnance Survey map. Field survey recorded the air raid shelter, which still survives intact, built into a north-east facing slope. All that is visible of the air raid shelter is a door and concrete lintel set into the north-east facing slope with a retaining wall running along the northern edge of the slope. A farm access track leading to farmland and the Glenlee hydro power station passes the air raid shelter on its north side. The air raid shelter itself is covered in soil and scrubby woodland.	Medium
4	Metal working site (possible)	MDG3882 / 64292	260600	580400	HER; Canmore	The HER and Canmore entries note that, in the 1970s (Ansell 1974), it was recorded that a large quantity of iron working residue (slag) was being exposed and washed out of the beds and banks of a small stream, which flows through an undulating pasture field, near Court Hall. Later field survey, by the Ordnance Survey in 1978, recorded that a quantity of iron slag had been exposed on the bed and banks of a small stream in this area. No significant features or any evidence of iron working residue were noted during the field survey.	Unknown (Medium)
5	Glenlee Park Non-Inventory Designed Landscape	MDG25541	261001	580122	HER; Historic Maps	A small designed landscape forming the setting for Glenlee Park (18th century country house) (LB9737). The house along with an associated steading (LB9739) stand towards the centre of the designed landscape close to Park Burn which runs through the designed garden. Several structures/features within the designed landscape, including Glenlee Park Sarcophagus (LB9741), Glenlee Park Bridge (LB9738) and Glenlee Park Urn and Pedestal (LB9740) stand close to the house and form part of the gardens dating to the 19th century. Woodland surrounds Glenlee Park and its associated buildings, while parkland edges the designed landscape.	Medium
6	Water of Ken, Cairn (Site of)	MDG21963	261157	580378	HER; Historic maps; APs	The HER entry records the presence of a possible prehistoric (Neolithic) burial cairn to the east of the A762 public road. No further details area provided. The Ordnance Survey 1st Edition map (Kirkcudbrightshire, 1853, Sheet 15, 6 inches to 1 mile) records the 'Site of' a cairn, but it is not shown on the 2nd Edition map (1895). There are no upstanding remains of the cairn visible on modern aerial photographs (GoogleEarthTM). A steel lattice electricity overhead line tower has been erected at the location of the former cairn.	Low
7	Coom Bridge	MDG20719 / 64302	261112	580365	HES Designations Portal; HER; Canmore	Early 19th century stone bridge over Coom Burn near Glenlee House, single depressed arch. The building is a Category C Listed Building (LB9724).	Low
8	Waterside, Find-spots	MDG3895 & MDG3883 / 64304 & 64305	261218	580755	HER; Canmore	The HER and Canmore entries record that flakes, blades and microlithics were discovered in plough-soil and mole hills of a terrace.	Low
9	Waterside / Water of Ken Cairn (Site of)	MDG3894	261237	580662	HER; Historic maps; Aerial photographs	The Ordnance Survey 1st Edition map (Kirkcudbrightshire, 1853, Sheet 15, 6 inches to 1 mile) records the 'Site of' a cairn, but it is not shown on the 2nd Edition map (1895). There are no upstanding remains of the cairn visible on modern aerial photographs; the area now consists of flat improved pastureland.	Low
10	Earlstoun Hydro Power Station and Bridge	MDG20720 / 213408 & 265828	261410	581879	HES Designations Portal; HER; Canmore	Symmetrical 2-storey, 6-bay rectangular plan Classical Modern power station with lower terminal bay to northeast. The hydro power station is still in use. The building is a Category B Listed Building (LB9275).	Medium
11	Earlstoun Hydro Power Station, Transformer Station	276569	261425	581914	Canmore	The Canmore entry records the presence of Earlstoun hydro power station transformer station at this location.	Low

Heritage Assets within the 1km Outer Study Area

- 9.52 Within the 1km Outer Study Area there are six Category B Listed Buildings, one Category C Listed Building and two NIDLs:
- The Listed Buildings are all 18th / 19th and 20th century buildings and include: Glenlee Park (LB9737) and its associated structures - a bridge (LB9738), a steading (LB9739), an urn and pedestal (LB9740), and a sarcophagus (LB9741); Glenlee hydro power station (LB9736); and, Coom Bridge (LB9724). Glenlee House, its associated structures and Glenlee hydro power station are all Category B Listed and of regional heritage importance and medium sensitivity. Coom Bridge is Category C Listed and of local importance and low sensitivity.
 - Glenlee Park NIDL forms the setting for Glenlee Park House (LB9737) and its associated structures. It is a small designed landscape comprising a mixture of mature woodland and parkland clustered around Park Burn, which runs through the centre of the designed landscape. It is of regional heritage importance and medium sensitivity.
 - Garroch NIDL forms the setting for Old Garroch House (LB9748), which is located outside the Outer Study Area. It is a small designed landscape comprising a mixture of mature woodland and parkland, extending between Knocksheen Glen and Glenlee, and taking in Garroch Hill and Donaldbuie. It is of regional heritage importance and medium sensitivity.

Implications of Climate Change

- 9.53 Qualitatively, the UKCP18⁹ projects the following for Dumfries and Galloway:
- an increase in summer and winter temperatures;
 - an increase in dry spells, particularly in summer months;
 - an increase in winter rainfall; and
 - an increase in wind speeds, including an increase in the frequency of winter storms.
- 9.54 With regards to heritage assets identified within the Inner Study Area and 1km Outer Study Area, it is not thought that there will be any significant changes to existing conditions resulting from projected climate change:
- Any below ground heritage assets, are unlikely to be materially affected by the projected changes in ambient temperature, increased winter rainfall or prolonged dry spells in summer; and,
 - Whilst the projected increase in winter rainfall and in wind speeds is acknowledged, this is not expected to have a material effect on the condition of any above ground heritage assets over the time period in question.
- 9.55 Based on the qualitative assessment above and in combination with professional judgement, there are likely to be no changes to the predicted effects set out in this assessment in the event that the climate changes in line with the UKCP18 projections.

The 'Do Nothing' Scenario

- 9.56 Notwithstanding the UKCP18 projections described above, if the proposed Glenlee substation extension was not to proceed, it is likely there will be little or no change to the baseline condition of the heritage assets that presently survive within the site. The current use of the land as improved grazing pasture will likely continue, resulting in limited disturbance to any heritage assets present, and only natural decay (weathering and erosion) will occur to surviving remains.

Micrositing

- 9.57 The proposed development layout has been designed to avoid effects on heritage assets as far as possible, but it is possible that further micrositing of temporary works may be required.

- 9.58 Any micrositing within the site will take account of the 2nd World War air raid shelter (3) which will be avoided. There are no micrositing requirements in regards the Listed Buildings (7, 10a) and other standing buildings (1, 2 and 11). Pipeline (1) and transformer stations (2 and 11) are currently in use and will be avoided. No upgrading works will be carried out to listed bridge, Coom Bridge (7) and the bridge associated with Earlstoun hydro power station (10b), which form part of the site access road to the substation site.
- 9.59 Mitigation to offset the direct (construction) effects on metal working site (4) and find-spots (8) is set out below (**Paragraphs 9.64-9.69**) and no micrositing will be required to avoid the sites providing this mitigation is undertaken.

Assessment of Effects

Construction Effects

- 9.60 Direct (physical) effects on cultural heritage assets are most likely to arise from ground disturbing activities that occur during development construction works, which may damage and possibly destroy, cultural heritage remains. Direct effects may also occur by above-ground disturbance, for example as a result of vehicle movement over cultural heritage features or storage of construction materials upon them. Direct effects on cultural heritage assets are normally adverse, permanent and irreversible.
- 9.61 The assessment of potential construction effects has been carried out with reference to the layout of the proposed development and the cultural heritage assets shown on **Figure 9.1**.
- Predicted Construction Effects*
- 9.62 Direct effects are predicted on two cultural heritage assets arising from construction of the proposed development.
- No upstanding remains of the possible metal working site (4) are present. However, it is considered that there is a high potential for buried remains to be present and any surviving remains could be exposed and disturbed during ground-breaking for construction of the proposed development. If buried remains of an early (prehistoric or medieval) bloomery site do survive, then the direct impact will, without mitigation, be potentially of high magnitude, resulting in an effect of major significance.
 - No remains of previous find-spots (8) now survive, however, it is considered that there is a high potential for further prehistoric finds and deposits to survive within farmland either side of the A762 public road and any surviving remains could be disturbed during ground-breaking for upgrading works (construction of passing places) along the site access road. Taking into account the limited extent of the footprint of ground disturbance, required for construction of the passing places, the likelihood of encountering remains of archaeological significance is, however, considered to be low. Based on the identified baseline cultural heritage character of this area, it is likely that any remains encountered would be of medium sensitivity. A low magnitude impact on such remains could result in an effect of minor significance.
- 9.63 No effects are predicted on the remaining heritage assets:
- Pipeline (1) and transformer station (2) which are integral components of the Glenlee power station and are still in use.
 - Air Raid Shelter (4) which stands just south of a farm access track that leads to farmland and the Glenlee substation from the Glenlee to Craigshinnie public road. As part of the construction works for the Glenlee substation extension, a new access track to the substation location will be constructed from the Glenlee to Glenlee Mains public road and the air raid shelter will consequently not be directly affected by the proposed development. The existing access track that passes the air raid shelter will be retained for its current use as a farm access track.
 - Glenlee Park NIDL (5) which is located immediately south of the A762 public road; no upgrading works are required along the section of road that bounds the northern edge of the NIDL.
 - The former sites of two possible burial cairns (6 and 9) which lie over 10m from the A762 public road; no upgrading works are required along the sections of road that pass the burial cairn sites.
 - The A762 public road carried across the Coom Burn by Category C Listed Coom Bridge (7) and across the Earlstoun hydro power station tailrace by bridge (10b). No upgrading works are proposed for the

⁹ UK Climate Projections (2019) [online], available at: <http://www.metoffice.gov.uk/research/collaboration/ukcp>, accessed August 2019.

listed Bridge (7) or bridge (10b) as part of the proposals and the bridges will not be affected by construction works.

- Category B Listed Earlstoun hydro power station (10a) which is still in use.
- Transformer station (11) which is an integral component of the Earlstoun hydro power station and is still in use.

Proposed Mitigation

- 9.64 Planning Advice Note 1/2013: Environmental Impact Assessment (PAN1/2013, as amended in May 2017¹⁰) describes mitigation as a hierarchy of prevention, reduction and compensatory (offset) measures. Prevention and reduction measures can be avoided through design, whilst compensatory measures offset impacts that it has not been possible to prevent or reduce.
- 9.65 The emphasis in Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN) is for the preservation of important remains in situ where practicable and by record where preservation is not possible. The mitigation measures presented below therefore take into account this planning guidance and provide various options for protection or recording and ensuring that, where practicable, surviving assets are preserved intact to remain the prehistoric historic elements of the landscape.
- 9.66 All mitigation works presented in the following paragraphs will take place prior to, or, where appropriate, during, the construction of the proposed development. All works will be conducted by a professional archaeological organisation, and the scope of works will be detailed in one or more Written Scheme(s) of Investigation (WSI) developed in consultation with (and subject to the agreement of) D&GC.
- 9.67 Formal arrangements will be put in place in the Construction Environmental Management Plan (CEMP) to appoint a retained professional archaeological organisation to whom any unforeseen archaeological discoveries made by the construction contractors would be reported. This will require any unexpected discoveries (e.g. building remains, human remains, artefacts etc.) in areas not subject to archaeological monitoring to be assessed and dealt with appropriately. The CEMP will make clear the legal responsibilities placed upon those who make unexpected discoveries of archaeological significance.
- 9.68 Specific mitigation will be put in place to investigate the nature and extent of the possible bloomery site (4) and find-spots (8):
- A grid of hand-dug test-pits will be excavated across the site of the possible bloomery (4) to establish if any remains survive and the possible extent of the site. Its presence should be detectable through spreads of iron slag and / or charcoal within the topsoil and any buried soil deposits. If metal slag or any other archaeological material is recovered during test pitting, rapid analysis of the material will be carried out to confirm the type of activities that have taken place and the potential (broad) date of the site. Provision will then be made, through consultation with the D&GC Archaeologist, for further excavation, sampling and analysis of any significant deposits encountered.
 - Hand-dug test pits will be excavated across the sites of proposed passing places that are located within or close to the find-spot areas (8) to identify and record any surviving remains. Provision will then be made, through consultation with the D&GC Archaeologist for further excavation, sampling and analysis of any significant deposits encountered.
- 9.69 Any requirements for archaeological mitigation through construction phase monitoring of works through watching briefs would be agreed in consultation with D&GC in advance of development works commencing and will be set out in the WSI.

Residual Construction Effects

- 9.70 The completion of the programme of archaeological mitigation works set out above will minimise or offset the loss of any archaeological resources that may occur as a result of the construction of the Glenlee substation extension.
- 9.71 Taking account of the mitigation proposed, any residual effects arising from construction of the proposed development in relation to direct effects on the cultural resource within the Inner Study Area will be of no more than **minor** significance.

Operational Effects

- 9.72 The introduction of the Glenlee substation extension into the surrounding landscape may adversely affect the setting of heritage assets. Such effects will be long-term but also reversible following any future decommissioning. Effects relating predominantly to the settings of heritage assets can occur during both the temporary construction phase and the operational phase, however as noted above a detailed assessment of setting effects during construction has not been undertaken.
- 9.73 Construction activity such as laydown areas, compound areas and temporary access tracks have the potential to give rise to temporary and fully reversible effects on the settings of heritage assets; on assets within the site and in the wider landscape. However, as noted above, these construction activities are however short-term / low impact effects on heritage assets in close proximity to the Glenlee substation extension itself and will have no permanent or long-term effect. Therefore, temporary effects on setting during construction have not been assessed on a site by site basis.

Predicted Operational Effects

- 9.74 The assessment of the effects on the setting of heritage assets has been carried out with reference to the layout of the Glenlee substation extension and the locations of cultural heritage assets as shown on **Figure 9.2**. The criteria detailed in **Tables 9.5-9.7** have been used to assess the nature and magnitude of the effects, which are set out in **Table 9.10**.
- 9.75 There are six Category B Listed Buildings (LB9736-LB9741), one Category C Listed Building (LB9724) and two NIDLS (Glenlee Park and Garroch) within the 1km Outer Study Area whose settings may be affected by the presence of the Glenlee substation extension.
- 9.76 **Table 9.10** details the findings of the assessment of the operational effects on a site by site basis, based on the current baseline conditions. It is assessed that there will be no adverse effects from the Glenlee substation extension on the settings of any of the heritage assets within the 1km Outer Study Area.

Proposed Mitigation

- 9.77 No adverse effects on the setting of heritage assets within the 1km Outer Study Area have been identified and no mitigation measures are proposed or considered necessary.

Residual Operational Effects

- 9.78 It is assessed that there will be no residual effects arising from the operational phase of Glenlee substation extension on the setting of heritage assets within the 1km Outer Study Area.

¹⁰ The Scottish Government (2017) Planning Advice Note 1/2013: Environmental Impact Assessment (PAN1/2013) as amended (2017)

Table 9.10: 1km Outer Study Area - Cultural Heritage Assets within 1km of the centre of the Glenlee substation extension

Asset no	Asset name	Heritage Status	Character & Setting	Sensitivity of Asset	Contribution of Setting	Sensitivity of Setting	Magnitude of Effect	Significance of Effect
LB9736	Glenlee hydro power station and Road Bridge	Category B Listed	<p>Rectangular plan power station in Classic Modern style dated to 1934 and built as part of the Phase 1 of the Galloway Hydropower Scheme with associated reinforced concrete twin arched bridge over tailrace.</p> <p>The power station stands just south of the Glenlee to Glenlee Mains public road. Its main elevation is aligned north overlooking the power station tailrace and the associated listed bridge. Around the power station are other associated (20th century) buildings, including penstocks and the electricity substation/transformer. Collectively, they form a distinct cluster of associated buildings/structures on the western edge of Glenlee. Distant views from the power station and bridge are not important elements of its setting and do not contribute to its cultural significance.</p> <p>The power station is a notable feature of the local landscape, and views of it are afforded from several locations in the surrounding landscape. The building is visible, set amidst woodland, whilst travelling south along the A762 public road, from Waterside to Coom Bridge. It is also visible from the southern edge of St John's Town of Dalry (for example from Dalry Parish Churchyard, LVIA VP4). From here, the upper levels of the power station are partially visible, backclothed by hill slopes and surrounded by woodland, and from Mulloch Hill (LVIA VP5), to the east of St John's Town of Dalry, the power station is visible surrounded by woodland.</p>	Medium	High (integral part of Phase 1 of the Galloway Hydropower Scheme)	High (localised)	<p>Imperceptible</p> <p>The Glenlee substation extension will be present to the south of the hydro power station, just beyond the existing hydro power station transformer and substation.</p> <p>Glenlee hydro power station and bridge form part of the existing electricity infrastructure at Glenlee and are surrounded by associated modern electricity structures (including the existing substation, penstocks and electricity transformer).</p> <p>The Glenlee substation extension will be seen in combination with the existing electricity substation and other modern electricity generating structures that surround the hydro power station and which are integral parts of its setting. Although a new element to the south of the hydro power station, the presence of the Glenlee substation extension will not result in a significant change to the current surroundings of the hydro power station. The Glenlee substation extension will be an addition to the integral infrastructure for the hydro power station.</p> <p>Views of the hydro power station from the Glenlee to Glenlee Mains public road and from the A762 public road will not be affected, the Glenlee substation extension being almost entirely screened from view by surrounding woodland and other power station infrastructure.</p> <p>The presence of the Glenlee substation extension will not adversely affect the current setting of the hydro power station.</p>	<p>None</p> <p>The presence of the Glenlee substation extension will not adversely affect the setting of the asset.</p>
LB9737	Glenlee Park	Category B Listed	<p>Two-storey picturesque Country House, dating originally to the 18th century and then remodelled and enlarged in 1822. A considerable amount of demolition work was carried out in the 1950s, mainly to south and east elevations, though the main portion of the house remains intact.</p> <p>The house stands towards the centre of a small designed landscape (Glenlee Park NIDL) close to the Park Burn which runs through the designed landscape. The main elevation is oriented towards the south-east, overlooking a small area of parkland that surrounds the house and along the main approach drive, which is through woodland from the south-east. Mature trees surround the house providing a secluded and localised setting.</p> <p>Glimpses of the house can be obtained while travelling along the A762 public road where it passes the house on its east side; the house seen within the surrounding woodland. Views to the house from other locations are screened by the extensive woodland that surrounds the house.</p>	Medium	High (Country House standing in small designed landscape)	High	<p>Imperceptible</p> <p>The Glenlee substation extension will be around 0.5km to the west of the house.</p> <p>Views of the Glenlee substation extension will be largely screened by mature woodland that surrounds the house; although it is possible that the Glenlee substation extension may be glimpsed from upper floors on the north-western elevation of the house. In these views the Glenlee substation extension will be seen as an addition to the existing Glenlee hydro power station complex, the substation visible beyond residential houses and mature trees that line the Glenlee to Craigshinnie public road. The Glenlee substation extension will constitute only a slight change to the character of the wider landscape views obtained from the house.</p> <p>The presence of the Glenlee substation extension will not adversely affect the secluded and localised setting of the house.</p>	<p>None</p> <p>The presence of the Glenlee substation extension will not adversely affect the setting of the asset.</p>
LB9738	Glenlee Park Bridge to East of House	Category B Listed	<p>Rounded-arched, ornamental, granite bridge over Craigshinnoch Burn, close to Glenlee Park House. Built post 1853.</p> <p>The bridge is located just west of Glenlee Park house (LB9737) carrying an approach drive to the house over the Park Burn. Views are focussed to the south-west and north along the burn and the bridge has a localised riverside setting. The bridge forms part of the designed landscape that surrounds Glenlee Park house.</p>	Medium	High (an element of the designed landscape)	High (localised)	<p>Imperceptible</p> <p>The Glenlee substation extension will be around 0.4km to the west of the bridge.</p> <p>Views of the Glenlee substation extension will be largely screened by mature woodland that surrounds the bridge.</p> <p>The presence of the Glenlee substation extension within the wider landscape will not adversely affect the localised riverside setting of the bridge.</p>	<p>None</p> <p>The presence of the Glenlee substation extension will not adversely affect the setting of the asset.</p>
LB9739	Glenlee Park Steading Near House	Category B Listed	<p>Two-storey, U-plan, courtyard steading built between 1853 and 1893 and with symmetrical elevations.</p> <p>The steading stands towards the centre of Glenlee Park NIDL; sited just south-west of Glenlee Park house (LB9737) and close to the Park Burn, which runs through the designed landscape. Mature trees surround the steading, providing a secluded and localised setting.</p>	Medium	High (a component of the designed landscape)	High (localised)	<p>Imperceptible</p> <p>The Glenlee substation extension will be around 0.4km to the west of the steading.</p> <p>Views of the Glenlee substation extension will be largely screened by mature woodland policies that surround the steading.</p> <p>The presence of the Glenlee substation extension will not adversely affect the secluded and localised setting of the steading.</p>	<p>None</p> <p>The presence of the Glenlee substation extension will not adversely affect the setting of the asset.</p>
LB9740	Glenlee Park, Urn and pedestal in	Category B Listed	<p>Earlier mid 18th century carved urn and later 19th century pedestal.</p>	Medium	High (garden ornament; an element of the	High (localised)	<p>Imperceptible</p> <p>The Glenlee substation extension will be around 0.5km to the west of the</p>	<p>None</p> <p>The presence of</p>

Asset no	Asset name	Heritage Status	Character & Setting	Sensitivity of Asset	Contribution of Setting	Sensitivity of Setting	Magnitude of Effect	Significance of Effect
	Grounds of Glenlee House		Standing at the edge of parkland just south of Glenlee Park house (LB9738) and at the edge of the main drive approach to the house. Localised garden setting. The urn is a decorative component of the designed landscape that surrounds Glenlee Park house.		designed landscape)		urn, which is a simple garden feature. The localised garden setting of the urn will not be adversely affected by the proposed development.	the Glenlee substation extension will not adversely affect the setting of the asset.
LB9741	Glenlee Park Sarcophagus Near House	Category B Listed	Elaborately carved Roman (or possible Renaissance) sarcophagus, which has been broken and repaired with metal bonding strips. The sarcophagus stands just outside Glenlee Park (LB9737) and is currently in use as a flower bed and part of the garden surrounding the house. Localised garden setting. The sarcophagus is a decorative component of the designed landscape that surrounds Glenlee Park house.	Medium	Negligible (an earlier Roman or Renaissance sarcophagus which has been reused as a flower bed; an element of the designed landscape)	Low (localised)	Imperceptible The Glenlee substation extension will be around 0.5km to the west of the sarcophagus, which is a simple garden feature. The localised garden setting of the sarcophagus will not be adversely affected by the proposed development.	None The presence of the Glenlee substation extension will not adversely affect the setting of the asset.
LB9724	Coom Bridge	Category C Listed	Single arched early-19 th century stone-built bridge over Coom Burn near Glenlee Park. The bridge carries the A762 public road across Coom Burn. Views are focussed along the burn to the west and east and north to south over the bridge. The bridge has a localised riverside setting.	Low	High (riverside setting)	High (localised)	Imperceptible The Glenlee substation extension will be around 0.5km to the west of Coom bridge. Views of the Glenlee substation extension will be largely screened by mature woodland that edges the Coom Burn. The presence of the Glenlee substation extension within the wider landscape will not adversely affect the localised riverside setting of the bridge.	None The presence of the Glenlee substation extension will not adversely affect the setting of the asset.
-	Glenlee Park	NIDL	NIDL forming the setting for Glenlee Park (18th century country house) (LB9737) and associated structures. The house, along with an associated steading (LB9739), stand towards the centre of the designed landscape, close to Park Burn, which runs through the designed garden. Several structures/features forming part of the designed landscape, including Glenlee Park Sarcophagus (LB9741), Glenlee Park Bridge (LB9738) and Glenlee Park Urn and Pedestal (LB9740), stand within the grounds around and close to the house. These are all component parts of the gardens, dating to the 19th century. Extensive mature woodland surrounds Glenlee Park and its associated buildings, while parkland edges the designed landscape. There are no apparent designed vistas or views out from the designed landscape, which is a locally prominent block of mature woodland within the Coom valley, between Glenlee and the A762 public road, and provides some scenic value to the local area.	Medium	High (enclosed designed landscape)	High (localised)	Imperceptible The Glenlee substation extension will be present to the west of the NIDL, on the opposite side of the Glenlee to Craigshinnie public road. At its closest the Glenlee substation extension is 60m away from the boundary of the designed landscape. Views out from the designed landscape are largely screened by mature woodland which will screen views from Glenlee Park (LB9739) and other associated Listed Buildings and structures that form part of the designed landscape. Glimpses of the Glenlee substation extension will be afforded from an area of parkland (improved grazing land) on the western side of the designed landscape. From here, the Glenlee substation extension will be seen together with the existing hydro power station and beyond residential properties that line the Glenlee to Craigshinnie public road. Mature trees that edge the parkland will also provide some screening. The presence of the Glenlee substation extension within the wider landscape will not adversely affect the setting of the NIDL.	None The presence of the Glenlee substation extension will not adversely affect the setting of the asset.
-	Garroch	NIDL	NIDL forming the setting for Old Garroch House (Late 17 th /18 th Laird's house) (LB9748) and associated structures. The NIDL principally consists of a block of parkland and woodland that surrounds Old Garroch House. Old Garroch House stands towards the northern end of the designed landscape, on a north facing slope overlooking the Knocksheen Glen; views from the house to the south being limited by rising topography. Views from within the NIDL are largely constrained to the north and north-east looking out along and across the Knocksheen Glen and along the Ken Water Valley, or to the south-west across the Dunveoch Glen. Mature woodland at the southern end of the NIDL largely limits views out in this direction. The Glenlee to Knocksheen public road runs through the eastern edge of the designed landscape and distant views of the designed landscape can be gained from the A762 public road to the east, the mature woodland providing some scenic value to the local area.	Medium	High (parkland and woodland surrounding Old Garroch House providing a setting for the house and associated structures)	High	Imperceptible The Glenlee substation extension will be present to the south-east of the NIDL, at its closest being around 0.7km away. The Glenlee substation extension will not be visible in views from Old Garroch (LB9748) and views out from the designed landscape, towards the proposed development, are largely screened by mature woodland. Glimpses of the Glenlee substation extension may be afforded from the southern end of the designed landscape. In these views, the Glenlee substation extension will be seen beyond the existing hydro power station and substation and backclothed by hill slopes. The presence of the Glenlee substation extension within the wider landscape will not adversely affect the setting of the NIDL.	None The presence of the Glenlee substation extension will not adversely affect the setting of the asset.

Cumulative Construction Effects

Predicted Cumulative Effects during Construction

- 9.79
- There will be a potential direct cumulative effect on one heritage asset, possible metal working site (4), which is located within the site of the Glenlee substation extension/temporary works and within the footprint of the Infrastructure Location Allowance (ILA) for the KTR Project (Electricity Overhead Line; Earlstoun to Glenlee (E-G), Glenlee to Tongland (G-T) and BG Route Deviation sections).
- 9.80
- Following the implementation of the proposed mitigation detailed above in **Paragraphs 9.64-9.69**, the possible metal working site (4) will have been investigated and, if necessary, excavated and recorded in detail. As a result there will be no remains left within the site of the proposed Glenlee substation extension/temporary works. Taking this into account, the cumulative effect of the proposed development in combination with the KTR Project on the metal working site (4) will be no more than of **minor** significance.

Proposed Mitigation

- 9.81
- The completion of the programme of archaeological mitigation works detailed above (**Paragraphs 9.64-9.69**) will minimise or offset the loss of any archaeological resources that may occur as a result of the cumulative construction effects of the proposed development.

Residual Cumulative Effects during Construction

- 9.82
- A **minor** residual effect on the bloomery site (4) will result, if buried remains survive. If no buried remains survive the residual effect will be **none**.

Cumulative Operational Effects

Predicted Cumulative Effects during Operation

- 9.83
- The presence of the Glenlee substation extension in combination with other proposed developments may have an adverse cumulative effect on the setting of heritage assets in the vicinity of the Glenlee substation extension.
- 9.84
- Within the 1km Outer Study Area the developments relevant to the cumulative assessment of effects on the settings of heritage assets are:
 - One new 132kV electricity overhead line (OHL): - comprising the KTR Project (Polquhanity to Glenlee (P-G) (132kV Steel lattice towers); Earlstoun to Glenlee (E-G) (132kV wooden trident poles); Glenlee to Tongland (G-T) (132kV steel lattice towers); and, BG Route Deviation sections (132kV steel lattice towers)).
 - Two existing 132kV steel lattice electricity overhead lines: - N Route and BG Route. The N Route is to be removed as part of the KTR Project and the northern end of the BG Route is subject to a slight deviation as part of the same proposals.
- 9.85
- The KTR Project (P-G and E-G sections) will largely follow the same alignment as the existing N Route which is proposed to be decommissioned as part of the KTR Project. Only one new section of OHL (G-T section) will run on a new alignment to the existing OHLs (running south from Glenlee hydro power station).
- 9.86
- It is assessed that there will be no adverse effects on the setting of heritage assets within the Outer Study Area from the introduction of the Glenlee substation extension and no cumulative effects on the setting of heritage assets within the Outer Study Area from the Glenlee substation extension in combination with other developments are considered likely.

Proposed Mitigation

- 9.87
- No cumulative effects on the setting of heritage assets within the 1km Outer Study Area are considered likely and no mitigation measures are proposed or considered necessary.

Residual Cumulative Effects during Construction

- 9.88
- It is assessed that there will be no residual cumulative effects on the setting of heritage assets within the 1km Outer Study Area from the Glenlee substation extension in combination with other developments.

Interrelationship between Effects

- 9.89
- In specific regard to effects of the Glenlee substation extension on heritage assets, some potential interactions may arise from landscape changes and with impacts on the setting of heritage assets. The landscape aspects are described and assessed in **Chapter 6: Landscape and Visual Amenity**. The effects arising from the potential effects of the Glenlee substation extension on the surrounding landscape and on the settings of heritage assets are however distinct: the first is an effect on the landscape character and how the effects are perceived by people, while the second is an effect on the setting of individual or groups of heritage assets that contribute to their cultural significance or special interest and how these assets are perceived or understood and appreciated. This is detailed further in **Chapter 12: Summary**.

Further Survey Requirements and Monitoring

- 9.90
- No further survey or monitoring is considered to be required in relation to the potential effects of the Glenlee substation extension on cultural heritage.

Summary of Effects

- 9.91
- Table 9.9** below summarises the predicted effects of the proposed development on cultural heritage.

Table 9.10: Summary of Effects

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
Direct (construction) effect on any potential buried archaeological remains of an early (prehistoric or medieval) bloomery (4) from ground-breaking works for the proposed development.	Major	A grid of hand-dug test-pits will be excavated across the site of the possible bloomery (4) to establish if any remains survive and the possible extent of the site. Provision will also need to be made for further excavation, sampling and analysis of any significant deposits encountered. This second phase of work will also require post-excavation analysis and reporting of the results.	Minor
Direct (construction) effect on any potential buried archaeological remains associated with find-spots (8) from ground-breaking works for the proposed upgrading works along the site access road	Minor	Hand-dug test-pits will be excavated within the sites of proposed passing places which are located within or close to the area of find-spots (8). Provision will also need to be made for further excavation, sampling and analysis of any significant deposits encountered. This second phase of work will also require post-excavation analysis and reporting of the results.	Negligible
Direct (construction) effect on any potential buried remains	Unknown	Any requirements for archaeological mitigation through construction phase monitoring of works through watching briefs would be agreed in consultation with D&GC in advance of development works commencing and will be set out in the WSI.	Minor
Indirect (operational) effect on the setting of heritage assets.	None	No mitigation measures are proposed or considered necessary.	None
Cumulative (construction) effect on any potential buried archaeological remains of an early (prehistoric or medieval) bloomery (4) from ground-breaking works for the proposed development.	Minor	A grid of hand-dug test-pits will be excavated across the site of the possible bloomery (4) to establish if any remains survive and the possible extent of the site. Provision will also need to be made for further excavation, sampling and analysis of any significant deposits encountered. This second phase of work will also require post-excavation	Minor

Predicted Effect	Significance	Mitigation	Significance of Residual Effect
		analysis and reporting of the results.	
Cumulative effects on setting on heritage assets.	None	No mitigation measures are proposed or considered necessary.	None

ⁱ HM Government (1979) Ancient Monuments and Archaeological Areas Act 1979 (reprinted 1996), HMSO, London.

ⁱⁱ HM Government (1997) Planning (Listed Buildings and Conservation Areas (Scotland) Act 1997 (as amended by Town and Country Planning (Historic Environment Scotland) Amendment Regulations 2015), HMSO, London.

ⁱⁱⁱ The Scottish Government (2017) Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017.

^{iv} HES, 2019, Historic Environment Scotland Policy Statement (HESPS).

^v The Scottish Government (2014) Scottish Planning Policy.

^{vi} The Scottish Government (2011) Planning Advice Note 2/2011: Planning and Archaeology (PAN2/2011).

^{vii} Dumfries and Galloway Council (2014) Local Development Plan September 2014 (LDP).

^{viii} HES, 2016, Managing Change in the Historic Environment: Setting.

^{ix} Historic Environment Scotland (HES 2019a) Spatial Data Warehouse [online GIS downloader], available at: <http://portal.historuc-scotland.gov.uk/spatialdownloads> Accessed May & August 2018.

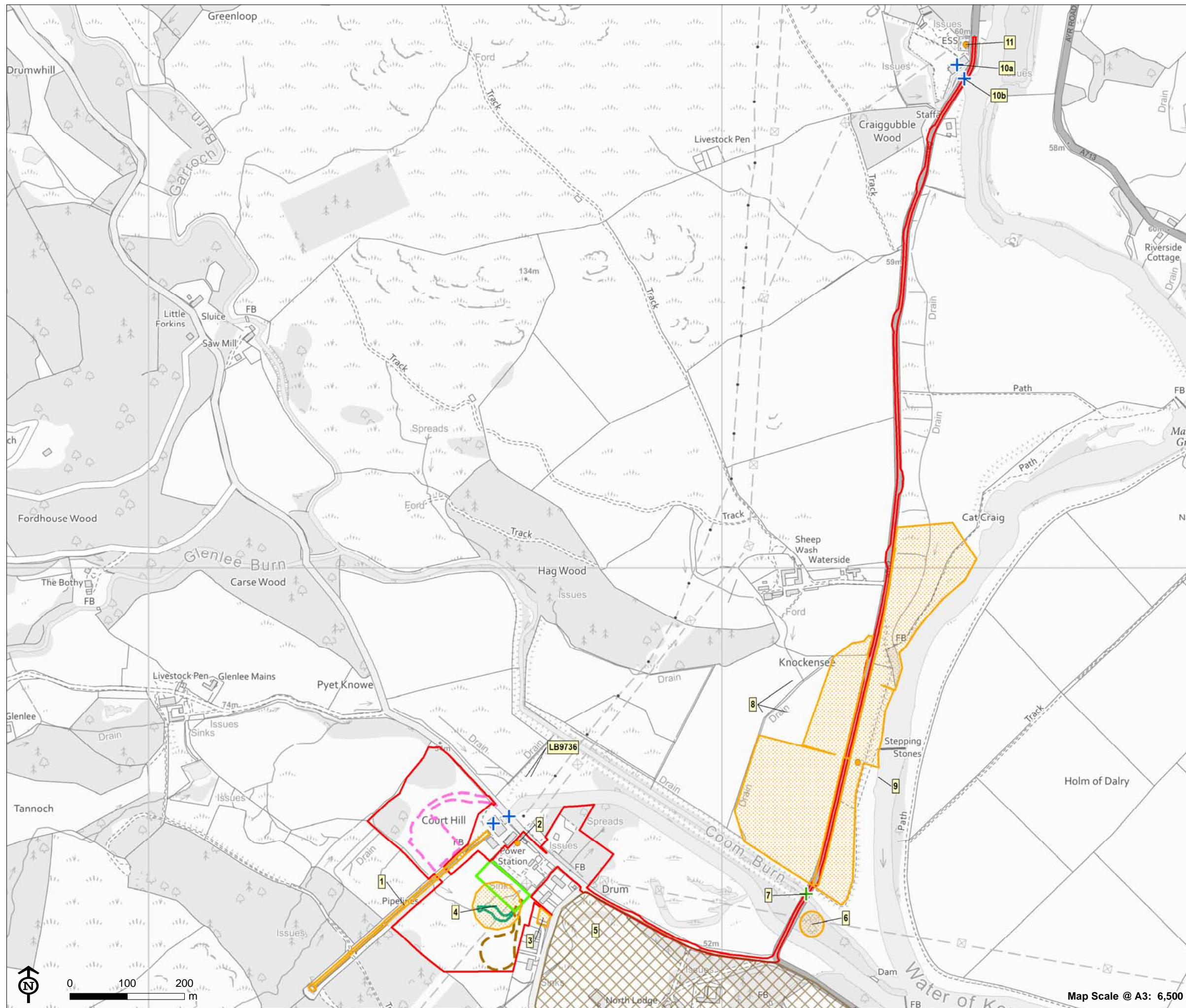
^x Historic Environment Scotland (HES 2019b) Canmore [online], available at: <http://pastmap.org.uk/> Accessed May & August 2018.

^{xi} Historic Environment Scotland (HES2019c) Historic Land-Use Assessment Data (HLAMap) [online], available at: <http://hlamap.org.uk/> Accessed May & August 2018.

^{xii} Coels, G.M Gittings, B.M. Millburn, P. and Netwon, A.J. (1998) Scottish Palaeoecological Archive Database [online], available from <http://www.geo.ed.ac.uk/spad/> Accessed May 2018.

^{xiii} HES (2016) Managing Change in the Historic Environment: Setting, Historic Environment Scotland

^{xiv} Ansell, M (1974) ‘Glenlee, iron smelting site’, Discovery Excav Scot, 1974, p 42.



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Figure 9.1: Cultural Heritage Assets within the Inner Study Area

- Planning application boundary (Inner Study Area)
- Substation extension
- Temporary compound and access for main works
- Temporary construction vehicle holding area
- Drainage ditch diversion
- Cultural heritage assets**
 - + Category B listed building
 - + Category C listed building
 - Cultural heritage site (point)
 - Cultural heritage site (area)
 - Glenlee Park NIDL



Map Scale @ A3: 6,500

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Figure 9.2: Cultural Heritage Assets within the Outer Study Area

- Planning application boundary
- Substation extension
- Cultural heritage assets
 - 1km outer study area
 - Category B listed building
 - Category C listed building
 - Non-Inventory Designed Landscape

