

APPENDIX 9B Evaluation of Detailed Route Options

9B.0 EVALUATION OF DETAILED ROUTE OPTIONS

9B.1 Following the selection of a broad route option, Option 1, this chapter outlines the development and evaluation of detailed route options to the east of the A483(T)/A5. Potential routes within this area were identified following the main principles of the Holford Rules and other published guidance and had regard to all the environmental baseline information gathered. As outlined in ES Chapter 5.0: Route selection process, routes were identified which avoided residential areas, including villages and other small settlements and occupied properties, areas of known nature conservation value, woodland, sites of heritage and amenity value. Routes were selected which maximised the potential for existing topography and vegetation to aid assimilation of the line into the landscape.

9B.2 The potential routes identified within Option 1 are illustrated in Figure 9.1.

Zoning of the Study Area

9B.3 The study area has been split into three geographical zones for the sole purpose of describing the route options. Each zone is described followed by a description of identified routes and reasons for their identification.

9B.4 The zoning of the study area has been used as a tool to enable a variety of routes and combinations of part routes to be considered. The key areas in identifying routes were considered to be the substation entries and the river crossing points. The zoning has enabled different river crossing points to be considered with different substation entry options. The following zones have been identified:

- Zone A Legacy – this zone extends from the substation at Legacy to a point approximately 4km to the south in the vicinity of Moreton/Gyfelia.
- Zone B River Crossings – this zone extends from a point in the vicinity of Moreton/Gyfelia to the B5070/B5068 which runs in an east west direction from the A5 through St Martin's. This zone covers an area of approximately 8km which includes the Dee and Ceiriog river valleys.
- Zone C Oswestry – this zone extends from the B5070/B5068 to Oswestry substation located approximately 5.5km to the south.

9B.5 The boundary between Zones A and B is not clearly apparent on the ground, however it is where the routes from A and B converge to a central point. The boundary between Zones B and C is clearly defined on the ground as the B5070/B5068. The route options to the north of this road are clearly focused on the river crossing points, whereas to the south the routes are focused on the entry into the substation at Oswestry making this an appropriate boundary for descriptive purposes.

Environmental and Technical Considerations

9B.6 The guidance presented in the Holford Rules is considered in comparing route options. The analysis of the detailed route options is carried out at a smaller scale and finer grain than the analysis of the broad route options. In addition to the designations discussed under broad corridor routeing, all published local, regional and non-statutory designations are taken into account. In addition to effects upon main settlements, questions of visual amenity in terms of villages and other small settlements, principal

transport routes and tourist attractions that may be affected are all considered, as is the effect upon landscape character.

- 9B.7 Appendix 9A identifies the environmental and technical constraints considered at the detailed stage.
- 9B.8 Note is taken of the comparative length of the different route options at this stage because this is not only a technical and economic issue but also because the longer route that is built, the greater the length over which environmental disbenefits are caused.

Identification of the Preferred Route

- 9B.9 It is not possible to identify the overall preferred route by selecting the preferred options on a zone-by-zone basis, as not all route options join at zone boundaries. The preferred option for one zone may not connect to the preferred route of an adjoining zone to form an overall coherent route. The route options illustrated in Figure 9.1 result in numerous possible overall routes from Legacy to Oswestry.
- 9B.10 The method employed for reducing the number of route options to ultimately arrive at a preferred route was a process of direct comparison of sections of those routes which have common starting and end points. Through selecting the 'best' option for each section, the number of possible overall routes is reduced step-by-step, ultimately identifying the route which is, overall, likely to cause the least impact upon environment and people.

Route Descriptions and Comparison

- 9B.11 Figure 9.2 shows the detailed route options and zone boundaries overlaid on the identified environmental and technical constraints. The following sections describe and evaluate the potential routes identified within each zone. The resulting one or two 'best' routes within a zone are then combined to form overall coherent routes from Legacy to Oswestry, and these overall routes then evaluated/compared.
- 9B.12 In the comparisons below, reference should be made to the relevant route descriptions and key constraints and the summary table of alternative route options presented in Appendix 9B.

Zone A (Legacy) Route Options

- 9B.13 Zone A is shown in Figure 9.3 and covers the area from Legacy substation to Moreton/Gyfelia approximately 4km to the south west. The substation itself is relatively unapparent in the wider landscape as it is surrounded by high mounding and tree planting, however the numerous line entries are more evident. The substation is located in a Special Landscape Area which extends out from the substation in all directions, but notably to the higher ground to the west. This designation extends in a south-westerly direction for just over 1km to the B5605, Wrexham Road. Further protective landscape designations within Zone A relate to the land around the registered historic parkland of the Erddig estate.
- 9B.14 Former mining and extractive industries are evident in the landscape, most notably Hafod Tip, which has recently been reclaimed and landscaped as a country park, and Bersham Tip which retains a distinctive angular appearance. The A483(T) runs in a north-south direction approximately 1.5km to the east of the substation. To the west the

land is primarily in agricultural use in the area immediately surrounding the substation, however there is residential development along the majority of roads, a crematorium to the south of the substation, and the dense urban development of Rhosllanerchrugog/Johnstown and Ruabon further to the south. The built development within this area combined with existing overhead line routes entering the substation limits potential route options available in this area.

9B.15 To the east of the A483(T) the land becomes more open and agricultural with less built development. It comprises gently undulating pastoral land bounded by mature hedgerows supporting mature hedgerow trees with scattered farms along a network of minor roads. The National Trust owned Erddig Hall lies to the north of this area, which includes Hafod-y-bwch Farm Park at its southern most extent. There are fewer constraints to routeing within this part of Zone A and routeing opportunities are more flexible.

9B.16 The key constraints within Zone A are:

- There are already several existing overhead lines of a variety of design and voltages entering the substation at Legacy.
- The continuous built development of Rhosllanerchrugog, Johnstown and Ruabon prevent a route option being progressed to the south
- Built development along the B5605, Hafod and Bersham Tips, the A483(T) and the National Trust owned Erddig property restrict route options to a narrow band of land which already supports several existing overhead lines.
- A partially completed development (Rural Welcome Centre) including a residential property occupies a very narrow pinchpoint of land between A483(T) and Hafod Tip.
- Wat's Dyke runs in a broadly north-south direction to the east of the A483(T)
- Hafod Tip, a steep sided, elevated area of woodland which is part of the Special Area of Conservation (SAC) site known as Johnstown Newt Sites, currently managed by WCBC as a community park.
- Offa's Dyke runs in a broadly north-south direction between the substation and Pentre Bychan.
- Several other Scheduled Monuments in the area – moated sites and barrows.
- Large areas safeguarded for protection of mineral resources between Legacy and the A483(T)

Route A1

9B.17 This option leaves the substation as an underground cable taking a south easterly route along the existing road system to Pentre Bychan via the B5097 Bronwylfa Road and B5426, Smithy Lane, to its junction with the B5605, Wrexham Road. East of Wrexham Road it emerges onto a wood pole support and continues in a south-easterly direction across open farmland, to skirt around the northern boundary of Hafod Tip to Hafod Road. The route corridor here occupies a narrow strip of land between Hafod Tip and the A483(T). Crossing Hafod Road and the A483(T) in the vicinity of the bridge taking Hafod Road over the trunk road, the route continues in a south-easterly direction to a point west of the fishing lakes at Sontley.

9B.18 From here it would follow a more southerly route for approximately 1km before again heading in a south easterly direction through agricultural land, crossing Wat's Dyke, and then heading in a south-easterly direction between Moreton Below and Gyfelia. There are several farms and isolated properties within this area, and the route has been aligned to avoid close proximity to these properties.

Key Environmental Factors

9B.19 The following key environmental factors have been identified related to route A1:

- Potential effect on archaeology during cable laying. There are several known archaeological sites in the vicinity of the substation
- Proximity to SAC and community park at Hafod Tip, potential tree loss
- Offa's Dyke crossing (cable)
- Wat's Dyke crossing (wood pole)
- Crosses area safeguarded for protection of mineral resources

Route A2

9B.20 This route would utilise the route taken by the existing 'portal' frame overhead line. The portal line carries a single 132kV circuit. This existing circuit could be combined with the proposed 132kV circuit together on a double circuit lattice tower (pylon) line. The existing portal line would be dismantled and replaced by a double circuit line to the point where the two circuits would diverge. This option allows for a reduction in the number of overhead lines routed through this area, however it would result in larger and taller supports being required to carry the two circuits. Figure 4.1 shows a comparison of the different support types to which reference is made.

9B.21 This route would be cabled for approximately 0.5km from Legacy substation to a point to the south of the B5097 Bronwylfa Road where the existing portal line commences. From here the portal line would be replaced by a lattice tower line to a point to the east of the A483(T) at the point of an existing deviation tower. From this point the portal line would continue in an easterly direction on the alignment it currently occupies and a new wood pole route would head in a southerly direction to a point west of the fishing lakes at Sontley. At this point the line could either join with route A1, or take a more south-easterly direction along A2 for approximately 1km to beyond Moreton View, then turning onto a southerly alignment to cross the B5426 west of Gyfelia.

Key Environmental Factors

9B.22 The following key environmental factors have been identified related to route A2:

- Visual effect of double circuit lattice tower line replacing portal line from Legacy to east of A483(T) – more substantial and taller structures, but with greater spans between towers, so fewer supports required.
- Lattice towers would replace portal supports in landscape protected by local designation (Special Landscape Area)
- Proximity to 3 Scheduled Monuments (double circuit lattice tower section)
- Close proximity to several properties, including 2 Grade II* listed buildings at Hafod y Bwch Hall
- Wat's Dyke Crossing (wood pole overhead line)
- Offa's Dyke crossing (cable)
- Route crosses a small section of National Trust land (not publicly accessible)

Route A3

9B.23 Route A3 would similarly combine the existing circuit carried by portal frame supports and the new circuit onto a double circuit lattice tower line. This route however considers the potential for realigning the line away from the existing portal route to increase the distance it is sited from its closest visual receptors. The existing portal line would be dismantled to a point where the two circuits would diverge in separate directions to the

east of the A483(T). This route follows a line approximately 0.25km to the north of the existing portal crossing of the A483(T).

- 9B.24 The new double circuit lattice line would run east to the north of Hafod-y-bwch Farm Park through the National Trust owned land associated with Erddig Hall to a point west of Sontley, crossing Hafod Wood and Wat's Dyke in the process. From here the route would run south to the present alignment of the existing portal line from where the portal line would continue east and a new wood pole line would run south through undulating agricultural land primarily in pastoral use. This route would follow the same alignment as route A2 from north of Moreton View to the Zone boundary. The proposed route is aligned to avoid close proximity to farms and isolated dwellings.

Key Environmental Factors

- 9B.25 The following key environmental factors have been identified related to route A3:
- Route crosses National Trust owned land using lattice towers – close proximity to Erddig Registered Parkland and Hafod-y-Bwch Farm Park
 - Tree removal likely to be required at Hafod Wood Wildlife Site of County Importance (WCBC)
 - Portal line removed from views from Middle Sontley Farm and nearby properties
 - Wat's Dyke crossing
 - Offa's Dyke crossing (cable)
 - Proximity to 3 Scheduled Monuments (lattice section)
 - Proximity to 2 Grade II* listed buildings

Comparison of Zone A (Legacy) Options: A1, A2 and A3

- 9B.26 In this zone, Option A1 uses 1.5km of underground cable and 4.2km of wood pole overhead line. Options A2 and A3 use a smaller amount of underground cabling, and both utilize steel lattice towers for a good proportion of their overall length. Although the use of lattice towers would enable removal of sections of an existing overhead portal line, thus bringing some benefits in terms of visual amenity, in general the use of lattice towers is considered likely to have wider effects on visual amenity than use of wood pole construction.
- 9B.27 It is considered that the numbers of residential properties where views would be affected would be approximately the same for all options but that the effect would be greater where lattice towers were employed. Additionally, Option A3 would bring a new lattice tower overhead line within 0.5km of the Registered Historic Parkland of Erddig, within land owned by the National Trust, and would be likely to require tree removal where it crosses Hafod Wood, a Wildlife Site of County Importance. Although it is acknowledged that benefits would arise from removal of the portal line from views from properties in the vicinity of Middle Sontley, this option was rejected because of the adverse effects described above.
- 9B.28 The balance between option A1 and A2, favours A1 in terms of effects on views and effects upon designated landscapes. The visual effects of a wood pole line are generally likely to be less than those of a line supported on steel lattice towers. Also option A2 would pass through a Special Landscape Area on lattice tower overhead line, whereas option A1 is undergrounded through the designated area. There is no clear favourite between these options in terms of other environmental considerations (ecology, cultural heritage, tourism).

9B.29 Option A1 was selected as the preferred option through Zone A.

Zone B (Dee River Crossing) Route Options

- 9B.30 Zone B is illustrated at Figure 9.4. It extends from Moreton/Gyfelia southwards for approximately 8km to the B5070/B5069 which runs in an east-west direction from the A5 through St Martin's. The zone is primarily rural in nature and the Dee and Ceiriog river valleys form the key features.
- 9B.31 The land to the north of the River Ceiriog falls within Landscape Character Area 13a Welsh Maelor and comprises gently undulating pastoral lowland with an abundance of mature hedgerows and hedgerow trees. Within this agricultural landscape there are several large estates where the landscape is of a more parkland character. The estates include Wynnstay Hall, which occupies several square kilometres to the north west of the zone; Brynkinalt to the south west of the zone in between the Rivers Dee and Ceiriog; and Pen-y-lan, Rosehill and Erbistock to the centre of the zone to the immediate north of the River Dee.
- 9B.32 The Dee and Ceiriog river valleys form prominent features in the landscape. The valleys are steeply sloping to the west becoming gentler towards the east where the River Dee widens and meanders. Valley sides are predominantly wooded with relatively few breaks in the woodland vegetation. The river valleys are locally designated areas of high landscape value. Both the Dee and Ceiriog are important fishing areas, with access being confined primarily to private tracks and access points for permit holders.
- 9B.33 A SAC designation applies to the entire length of the rivers within the study area. This European nature conservation designation primarily covers the area of water and does not include the valley sides.
- 9B.34 To the south of the Dee, the landscape is similarly rolling and in agricultural use, with an increase in arable production. Fields are bounded by mature hedgerows and development primarily comprises small settlements and isolated farms and dwellings, with St Martin's forming the main settlement focused along the B5070/B5069.
- 9B.35 Sites of nature conservation value, archaeologically important sites and listed buildings are scattered throughout the area.
- 9B.36 Two high voltage overhead lines run through this zone: the existing SP Manweb 132kV Legacy to Oswestry line and the NGC 400kV Ironbridge No. 2 line from Legacy to Ironbridge. To the north of the River Dee these lines run in close parallel, whereas to the south of the river crossing they diverge. The 400kV line continues in a south westerly direction whilst the 132kV line takes a south easterly direction towards Oswestry, where it terminates at the substation.
- 9B.37 The key constraints in Zone B are:
- Several historic parkland landscapes covering a sizable area
 - River Dee SAC designation (includes Ceiriog)
 - Dee and Ceiriog river valleys and associated woodlands
 - Several ecological and archaeological sites
 - Scattered farms and small settlements
 - Larger settlement of St Martin's to south of zone
 - Wat's dyke runs to the west of the zone

- Maelor Way Long Distance Footpath
- Local landscape designations cover much of the central area

Route B1

- 9B.38 Route B1 takes the western most route through this zone. From the boundary with Zone A there are three sub-options available which then merge together 2km to the south of Wynnstay Hall Registered Park and Garden. Option B1(C) takes the most easterly and southerly route which skirts around the edge of the land considered to be within the essential setting of Wynnstay Park. Option B1(B) takes the central line of the three options and runs partially through land associated with Wynnstay Park parallel to the northern edge of The Drive Wood before running south past Argoed Farm. Option B1(A) takes the western most route following a similar line to an existing 33kV overhead line crossing the A539 to the west of Cinders Farm and passing through land associated with Wynnstay Park.
- 9B.39 From the convergence point of these three sub-options, route B1 travels in a southerly direction through agricultural land following a clough woodland associated with a River Dee tributary. To the south east of Park Farm, the route changes direction to follow a south-westerly route beneath the existing 132kV and 400kV overhead lines and then turns south to a river crossing point in the vicinity of Coedleoedd Wood. This river crossing point utilises an existing break in the valley woodland.
- 9B.40 From the River Dee crossing point the route runs south through an attractive valley area associated with the River Ceiriog. There are several options available for a route through this area, with the preferred one being to follow the natural contours along the valley floor to Tenement before running west along side an area of woodland (Bola's Dingle) to the higher ground at Lower Halton. From here the route would run south again following the natural contours and back into the valley to cross the River Ceiriog at Pont-y-blew. This crossing point is currently utilized by an existing 33kV line. A more direct route along the valley floor between Tenement and Pont y Blew was discounted due to the presence of several dwellings along the valley floor and woodland vegetation along the river. As the route leaves the valley and re-enters, it exploits localised variations in topography and woodland cover, following side valleys linked to the Ceiriog valley.
- 9B.41 On leaving the Ceiriog valley near Glynmorlas, the route runs in a southerly direction alongside Coed Glanyrafon woodland through land in agricultural use. It passes through Rhyn Park (scheduled monument area) and crosses the B5070 to the west of Rhos y Llan Wood and the small hamlet of Nefod, to the west of St Martin's.

Key Environmental Factors

- 9B.42 The following key environmental factors have been identified related to route B1:
- Options B1(B) and B1(A) pass through a small corner of Wynnstay Registered Parkland, plus approximately 1km of the Essential Setting.
 - Option B1(B) benefits from backgrounding by The Drive Wood.
 - Option B1(C) avoids the Registered Parkland and its Essential Setting; however is in closer proximity to more properties and is in an area of more open landscape character.
 - 7.5km through SLA associated with River Dee and Ceiriog
 - Dee and Ceiriog River SAC crossings
 - 1km through Essential Setting of Brynkinalt Registered Park and Garden
 - Crosses Scheduled Monument of Rhyn Park Roman military site

- Maelor Way Long Distance Footpath
- Crosses Wildlife Site of County Importance (Bola's Dingle) near Lower Halton with potential tree losses
- Proximity to landfill site at Lower Halton
- Maintains distance from properties
- Crosses area safeguarded for protection of mineral resources in vicinity of Ceiriog valley

Route B2

- 9B.43 Route B2 takes the most easterly route through Zone B. It follows that of Option B1(C) to Park Eyton and runs in a south-easterly direction through undulating farmland past Crymbal and Park Eyton. It continues from here in a south-easterly direction, crossing the A539 at Twining Hill and then following a route across agricultural land between two minor roads which lead towards Erbistock. The route avoids close proximity to dwellings and follows the general lie of the land. It avoids areas of woodland vegetation, utilising it as backgrounding or for screening purposes where possible.
- 9B.44 Route B2 crosses the River Dee approximately 0.5km to the west of the Boat Inn and just under 0.5km to the south of Manley Hall. From here it follows the lower lying ground along the woodland lining Shell Brook to maintain distance from Sodylt Hall and crosses the B5069 to the east of Bank Farm. The route then heads in a south westerly direction through agricultural land utilising topography and the vegetation associated with Llanyfelin Brook tributary and Castle Dingle to accommodate the line where possible. Close proximity to dwellings is avoided. This route crosses the existing 400kV overhead line to the south east of Vron Farm and then joins route B3 east of Street Dinas to head in a more southerly direction to cross the B5068 to the east of St Martin's.

Key Environmental Factors

- 9B.45 The following key environmental factors have been identified related to route B2:
- There are tourism assets in the form of The Boat public house and Gardens open to the public
 - 3km of route pass through SLA
 - 0.3km pass through essential setting of Erbistock Registered Parkland
 - Proximity to Erbistock Conservation Area
 - Dee River SAC crossing
 - PROW along northern river bank is well used walk from popular public house The Boat
 - Maelor Way Long Distance Footpath near southern river bank
 - Fishing rights and permanent fishing platform in vicinity of proposed river crossing point
 - Crossing point utilises natural break in woodland vegetation along Dee and minimises tree removal required.
 - Routed through relatively unpopulated areas and maintains distance from isolated farms and dwellings
 - Crosses extensive area safeguarded for protection of mineral resources in vicinity of Erbistock (Dee valley)

Route B3

- 9B.46 Route B3 follows the same course as Option B1(C) to a point 0.5km north of the small village of Pen-y-lan. From here it follows a route south through farmland towards Pen-y-

lan. The route runs to the east of Bryn Farm and Bryn Pen-y-lan and runs through the northern extent of the Pen-y-lan Registered Historic parkland.

9B.47 From this point there are 2 options which run to the north and south of Lower Farm, B3(A) and B3(B). Both options avoid existing woodlands and cross the River Dee approximately 1km distance from each other. After crossing the Dee, they converge to the south of Sodylt Wood. From this point the route runs south alongside a clough woodland and then in a south westerly direction approximately parallel and offset approximately 300m from the B5069. This route crosses beneath the existing 400kV overhead line to the west of Warren Hall and heads southeast to cross the B5069 to the north-east of Little Common/Street Dinas. The route runs south through farmland before crossing the BB5068 to the east of St Martin's.

Key Environmental Factors

9B.48 The following key environmental factors have been identified related to route B3:

- 3km through SLA
- Relatively close proximity to rear of properties in Bryn Farm and Bryn Pen-y-lan
- Passes through northern extent of Pen-y-lan Registered Historic Parkland
- Dee River SAC crossing
- Option B3(B) runs in close proximity to four dwellings, in comparison to B3(A), which is not close to any dwellings
- Option B3(B) requires crossing woodland on banks of River Dee (Sodylt Wood), possibly requiring tree removal

Route B4

9B.49 Route B4 follows the alignment as described in Route B1 for approximately 3.5km south of the boundary with Zone A, to a point north of the River Dee where route B1 crosses beneath the existing overhead lines. From here, this route option would parallel the existing 132kV lattice line to utilise the existing corridor through areas of woodland and use the same crossing point over the River Dee. It is considered likely that additional tree removal will be required at several points to allow an appropriately wide easement to accommodate two overhead lines.

9B.50 This route follows the existing 132kV line for 3.5km to a point to the south of Glynmorlas where the existing line then heads in a south westerly direction, and the proposed route heads in a south easterly direction. It crosses the B5069 utilising a break in the built development between St Martin's and Moors Bank, to the east of Rhyn School.

Key Environmental Factors

9B.51 The following key environmental factors have been identified related to route B4:

- Tree removal would be required in woodlands on the eastern slope of the Ceiriog valley
- 3.5km parallel section with existing lattice line (effect on visual amenity of properties in Glynmorlas)
- 4.5km through SLA
- Dee River SAC crossing
- Runs through attractive valley area of Dee-Ceiriog confluence which already contains overhead lines

- Runs in relatively close proximity to properties in River Ceiriog valley area (Ddol)
- Runs through 0.3km Ifton Meadows Local Nature Reserve
- Utilises narrow area of undeveloped land in between St Martin's and Moors Bank potentially bringing the line in close proximity to a relatively high number of visual receptors
- Crosses Maelor Way Long Distance Footpath
- The effects relating to route B1 where it is subdivided into options B1(A), B1(B) and B1(C) in the vicinity of Wynnstay Registered Parkland.

Route B5

9B.52 Route B5 follows the alignment as described in Route B1 for approximately 6km south of the boundary with Zone A, to a point north of the hamlet of Tenement, in the Ceiriog valley. It crosses the River Ceiriog just west of the hamlet, following a south-easterly alignment across the valley and exploiting a small break in woodland on the eastern valley side. Some tree removal may be necessary to widen this gap. The route crosses beneath the existing 132kV power line south of Lower House Farm, and continues in a southerly direction for approximately a kilometre, crossing farmland and Ifton Meadows Local Nature Reserve. South of Ifton Meadows the route follows a southwesterly alignment through gently undulating farmland. It then follows a southerly route (along the line of a former railway) between Rhos-y-llan Wood and an industrial estate situated immediately north of the B5070. After crossing the B5070 the route continues in a southerly direction to cross the Shropshire Union Canal near Preeshenlle Bridge, north of Henlle Hall, where it joins with Route C1.

Key Environmental Factors

9B.53 The following key environmental factors have been identified related to route B5:

- Some tree removal may be required in three locations
- 6.9km through SLA
- Dee and Ceiriog River SAC crossings
- Runs through 0.3km Ifton Meadows Local Nature Reserve
- Crosses Maelor Way long distance footpath
- The effects relating to route B1 where it is subdivided into options B1(A), B1(B) and B1(C) in the vicinity of Wynnstay Registered Parkland.

Comparison of Zone B (Dee River Crossing) Options

9B.54 Five possible route options have been identified through Zone B. Routes B1, B4 and B5 cross the River Dee in the vicinity of the existing 132kV overhead line crossing, near the confluence of the Dee with the Ceiriog. Routes B2 and B3 follow a more easterly alignment, crossing the River Dee in the vicinity of Erbistock. River crossing position influences the route alignments further south, with eastern river crossings taking a route to the east of the large village of St Martin's (Routes C3 and C4), and western river crossings passing to the west of St Martin's (Routes C1 and C2).

9B.55 For Zone B, a comparison of the eastern river crossing route options was undertaken, followed by a comparison of the western river crossing route options. The best option from each of these was then added to the best linking/corresponding western or eastern option in Zone C, from St Martin's to Oswestry substation. Finally, the 'best overall' western option was compared with the 'best overall' eastern option.

Sub-options

- 9B.56 As illustrated in Figure 9.1, there were initially several short variations to routes, such as three sub-options for Route B1 to pass through or around Wynnstay, a registered parkland. Only the favoured sub-option is described and evaluated here. The comparisons of sub-options are detailed at the end of this document.

Comparison of Eastern River Crossings: B2 and B3(A)

- 9B.57 The preferred sub-option for Route B3 crossing of the River Dee is B3(A): see Appendix 9D. This is directly comparable with Route B2 between Park Eyton and Street Dinas. North and south of these points, the options follow a common route to the boundaries with Zones A and C.
- 9B.58 Both of these options traverse a large portion of locally designated landscape. Option B2 affects a slightly greater extent as it takes a more easterly route. Option B3(A) would pass through the corner of the Registered Parkland of Pen-y-lan; Option B2 crosses the essential setting of Erbistock, but maintains distance from the Registered part of this parkland.
- 9B.59 Both options are aligned well with local topography in general, and cross the river Dee directly at points which would minimise tree loss. However, immediately north of the Dee crossing Option B3(A) rises to cross an exposed local ridge line along an alignment less in keeping with landform and landscape pattern. South of the Dee, Option B2 has an overall better 'fit' with the landscape, in terms of utilizing topography and backgrounding by woodlands.
- 9B.60 In terms of effects upon people, Option B2 is considered to have less effect upon visual amenity of residential properties, primarily because B3(A) passes the small settlements of Pen-y-lan and Bryn Pen-y-lan (north of the river crossing) and Little Common/Street Dinas (south of the river crossing) whereas Option B2 is routed past individual dwellings.
- 9B.61 Option B2 may be visible from three listed buildings at Sodylt Hall and from the listed Manley Hall and is approximately 0.5km distant from Erbistock Conservation Area. Option B3(A) would not affect these, but may potentially affect two listed buildings in Bryn Pen-y-lan and the listed Bryn House, north of Pen-y-lan.
- 9B.62 Both options cross the Maelor Way on the southern side of the Dee valley. Option B2 would additionally cross a well-used public footpath on the northern bank of the Dee, originating from near The Boat Inn at Erbistock. The garden open to the public, at Garden House, Erbistock, would be 0.5km from Option B2.
- 9B.63 The choice between B3(A) and B2 is finely balanced. B2 has potential to affect public viewpoints in the vicinity of the tourism assets at Erbistock, although it is unlikely that there would be direct effects on views from the Garden House and public house gardens. Route B3(A) has no effect upon Erbistock although it too crosses the Maelor Way. Route B2 avoids effects on views close to all but occasional isolated properties and this absence of potential effects on settlements has led to a preference for Option B2.
- 9B.64 **Option B2 is carried forward as the preferred eastern river crossing.**

Comparison of Western River Crossings: B1, B4 and B5

9B.65 The comparison of the three route options for the crossing of the rivers to the west is presented in summary form in Table 9B.1 overleaf, for ease of identifying which option is preferred in relation to the different environmental aspects. The table highlights only the main differences between the options. Where effects of the three routes are anticipated to be similar, such as effects upon tourism/recreation related to the line crossing over the river, these have not been included in the comparison table.

9B.66 Route B4 performs least well of the three options in nearly all comparisons and is discounted. The selection of a preferred option from Route B1 and B5 requires a balancing of the effects upon landscape character with the effects upon cultural heritage and effects upon people, in terms of visual amenity. Whilst Route B5 has a less sympathetic alignment within the landscape than B1, this aspect is considered to be of lesser importance than avoidance of areas designated for their landscape, cultural heritage or scientific interest at a national level, namely the Essential Setting of Brynkinalt and the Rhyn Park Scheduled Monument Area.

9B.67 **Option B5 is carried forward as the preferred western river crossing.**

Table 9B.1 Comparison of Western River Crossings

Aspect	Route B1	Route B4	Route B5	Preferred
Effect on settlements	Generally routed away from settlements	Proximity to St Martin's , Moors Bank and St Martin's Moor	Generally routed away from settlements	B1/B5
Effect on scattered dwellings in Ceiriog valley near Dee/Ceiriog confluence	Passes within 150m of Pont y Blew properties, properties along Rhyn Lane and Erw'r Esgob Farm	Proximity to several properties in Ceiriog valley, Glynmorlas, Rhos y llan Farm, St Martin's School. Cumulative effect of paralleling.	Proximity to properties at Tenement in Ceiriog valley.	B5
Effect on designated landscapes	7.5km through SLA Affects Essential Setting of Brynkinalt Registered Parkland	6.5km through SLA	6.3km through SLA	B5
Effects on cultural heritage	Crosses Rhyn Park Scheduled Monument Proximity to 3 listed buildings.	Proximity to 2 listed buildings	Proximity to 1 listed building	B5
Effects on landscape character/ landform	Follows alignment relatively sympathetic to landscape	Parallels existing 132kV alignment along eastern bank of Ceiriog valley, relatively unsympathetic to topography and cutting through woodlands	Direct crossing of Ceiriog valley (less sympathetic than B1), and occupies a generally more elevated and exposed position along ridgeline east of Ceiriog valley.	B1

Aspect	Route B1	Route B4	Route B5	Preferred
Effects on trees and woodlands	Small amount of tree removal at Lower Halton	Tree removal likely in 4 woodlands to accommodate line adjacent existing 132kV	Tree removal likely to widen gaps at two woodland crossing points, and along disused rail line.	B1
Effects on nature conservation designations	Dee SAC crossing x 2 Crosses Wildlife Site of County Importance near Lower Halton	Dee SAC crossing x 1 Crosses Ifton Meadows LNR	Dee SAC crossing x 2 Crosses Ifton Meadows LNR	B4

Zone C (Oswestry) Route Options

9B.68 Zone C is shown at Figure 9.5. It extends from the B5070/B5068, which runs in an east-west direction from the A5 through St Martin's, to the existing substation at Oswestry. It comprises gently undulating agricultural land to the north with fields defined by mature hedgerows and trees. To the centre of this zone the land becomes flatter, low lying and more open in the area around New Marton in the vicinity of the Shropshire Union Canal. To the south the landscape remains low lying and flat around Halston and Fernhill Halls, however the occurrence of plantation woodland increases which reduces its openness. The west of this zone comprises higher intensity mixed agriculture with the larger settlements of Weston Rhyn, Gobowen and Oswestry located along the A5. The Oswestry Orthopaedic Hospital and Oswestry Showground are located to the south of Gobowen with Henlle Hall Golf Course and a new marina development located to the north. To the east of this area, between Dudleston Heath Criftins and Welsh Frankton, the landscape pattern is similar to that around St Martin's, comprising a small scale, undulating landscape with mature hedgerows and trees. There are large mineral consultation zones to the east.

9B.69 The embanked Oswestry Hill Fort forms a landmark feature in the landscape. Wat's Dyke runs in a northerly direction from the hill fort through Gobowen and to the east of Henlle Hall. There are several sites of ecological importance scattered through this area, with Fernhill Pastures, in the vicinity of Fernhill Hall, designated as a SSSI for its traditionally managed fen meadows.

9B.70 The key constraints within Zone C are considered to be:

- Several areas of historic parkland although none of these are Registered Parklands
- Areas of plantation woodland to south of the zone
- Fernhill Meadows SSSI
- Oswestry Hill Fort Scheduled Monument and its setting
- Wat's Dyke (discontinuous line of Scheduled Monuments)
- Shropshire Union Canal and associated lower lying open landscape
- Scattered farms and small settlements
- Larger settlements of Weston Rhyn, Gobowen and Oswestry
- Whittington village, Conservation Area and castle
- The Robert Jones and Agnes Hunt Orthopaedic Hospital and Oswestry Showground occupy significant area of land to the north east of the substation

Route C1

- 9B.71 Route C1 runs in a southerly direction from the B5070 with two potential options to avoid a listed building at Erw'r Esgob. These options cross the dismantled railway at separate points before converging prior to crossing the Shropshire Union Canal to the north of Henlle Hall. This route then runs alongside Wat's Dyke for approximately 0.5km. Wat's Dyke forms the eastern boundary to the grounds Henlle Hall, which are now a golf course.
- 9B.72 Route C1 runs in a south-east direction to the east of the settlements of Rhewl and Gobowen through agricultural land. Two sub-options, C1(A) and C1(B), take alternative routes either to the east or to the west of Hillyards Plantation before converging to the north of Fernhill Hall. Option C1(A) is the most direct route, and would follow an alignment currently taken by a low voltage (33kV) line, adjacent Hillyards Plantation. Route C1(B) runs approximately 1km to the east beyond the plantation. From the convergence point of the sub-options, route C1 runs in a westerly direction, crossing the railway and running through an area of agricultural land between the Orthopaedic Hospital to the north and Park Hall Farm and Oswestry Showground to the south. On crossing the A5 this route runs parallel to the A5 in a southerly direction towards the substation. Due to the presence of numerous other distribution lines occupying the narrow corridor of land between Old Oswestry Fort and the A5, including the existing 132kV overhead line, the proposed route would be laid as underground cable from a point just east of the A5 crossing to its entry to Oswestry substation (approximately 1.4km).

Key Environmental Factors

- 9B.73 The following key environmental factors have been identified related to route C1:
- Tree removal along dismantled railway – less tree removal anticipated on western most crossing point
 - Close proximity to Henlle Hall
 - Crosses and parallels Wat's Dyke Scheduled Monument
 - Option C1(A) runs in close proximity to Hillyards Plantation – possible tree removal required
 - Option C1(B) runs in close proximity to Great Fernhill listed building
 - Option C1(B) immediately adjacent Fernhill Pastures SSSI
 - Visual effect on setting of Oswestry Hill Fort minimised by undergrounding route in this vicinity
 - Potential effects on archaeology during cable installation

Route C2

- 9B.74 Route C2 utilises the break in development between Moors Bank and St Martin's and runs in a south-easterly direction from the B5069 to cross the Shropshire Union Canal to the east of St Martin's Moor. From here the route runs in a southerly direction through agricultural land avoiding running in close proximity to several farms which are located in the area. This route merges with route C1(B) to the north east of Hillyards plantation from where it follows a south easterly line to the north of Fernhill Hall and follows route C1 described above.

Key Environmental Factors

- 9B.75 The following key environmental factors have been identified related to route C2:

- Effect on visual amenity of residential properties on fringes of St Martin's and Moors Bank
- Runs in close proximity to Great Fernhill listed building
- Visual effect on setting of Oswestry Hill Fort minimised by undergrounding route in this vicinity
- Immediately adjacent Fernhill Pastures SSSI
- Potential effects on archaeology during cable laying

Route C3

9B.76 Route C3 runs from the B5068 to the east of St Martin's in a south-westerly direction through the Upper Wiggington area and crosses the Shropshire Union Canal to the north of New Marton locks. From here the route runs south through lower lying land passing to the west of the settlement of Henlle and to the east of Fernhill Hall. This route then runs in a south westerly direction through undulating farmland to the north and west of Whittington. The route crosses the A495 west of Whittington and skirts to the south of Drenwydd Farm, before taking a route 200m south of and approximately parallel with the A495, crossing the A5 and entering the substation at Oswestry from the east.

Key Environmental Factors

9B.77 The following key environmental factors have been identified related to route C3:

- Proximity to properties on eastern fringe of St Martin's
- Immediately adjacent Fernhill Pastures SSSI
- Close proximity to properties on northern and western fringes of Whittington village
- Proximity to Whittington Conservation Area
- Close proximity to Drenwydd (Listed Building)

Route C4

9B.78 Route C4 commences at the same point on the B5068 as Route C3, described above, to a point approximately 1km to the south-west of Upper Wiggington. From here the two routes diverge, with Route C4 taking a more easterly route through the lower lying land associated with the Shropshire Union Canal. Route C4 crosses the canal approximately 0.75km to the south of New Marton Locks and runs between the settlements of Henlle and Hindford. From here the route runs in a southerly direction through undulating agricultural land to the east of Whittington and to the west of Halston Hall. This route runs around the south of Whittington and heads in a westerly direction towards the substation at Oswestry, passing to the south of the sewage works located to the south of the A495. It then turns northwards to join Route C3, approaching Oswestry from the east.

Key Environmental Factors

9B.79 The following key environmental factors have been identified related to route C4:

- Proximity to properties on eastern fringe of St Martin's
- Approximately 2km through flat open lower lying land with little vegetation
- Close proximity to Halston Hall parkland estate
- Close proximity to southern edge of Whittington – including edge of the Conservation Area

Comparison of Zone C (Oswestry) Options

- 9B.80 Four possible route options have been identified through Zone C, the approach to Oswestry substation. Routes C1 and C2 are located to the west of St Martin's, and would link to Routes B1, B4 or B5 (*not all cross-links are shown*). Routes C3 and C4 follow a common alignment just east of St Martin's, and link to either Route B2 or B3.
- 9B.81 For Zone C, a comparison between Routes C1 and C2 was undertaken to determine the favoured option to join with the preferred western river crossing. A comparison between Routes C3 and C4 was similarly undertaken, with the favoured option linking with the preferred eastern river crossing option.

Sub-options

- 9B.82 As with sub-options for routes in Zone B, sub-options for routes in Zone C have been compared, with only the favoured sub-option reported here. Details of the comparison of sub-options for Zone C are included in Appendix 9.E.

Comparison of Western Options through Zone C: C1(A) and C2

- 9B.83 There are relatively few environmental constraints affecting routeing in the predominantly rural area between the western edge of St Martin's and Oswestry substation. In order to avoid the settlement of Gobowen and large hospital and college grounds to the south of this, both routes C1(A) and C2 take a generally southerly alignment across the shallow valley of the River Perry. The routes join at Great Fernhill, following a common alignment westwards and then southwards to the substation.
- 9B.84 Route C1(A), the most westerly route, generally avoids proximity to settlement, whereas Route C2 exploits a gap in buildings between St Martin's and Moors Bank/St Martin's Moor, and is likely to have an effect upon visual amenity of a greater number of properties.
- 9B.85 Route C1(A) crosses and parallels the Scheduled Monument of Wat's Dyke in the vicinity of the Shropshire Union Canal, whereas Route C2 has no effects upon cultural heritage (other than those common to both routes where they combine to approach Oswestry substation).
- 9B.86 Other differences between the routes include a greater potential impact upon nature conservation designations with Route C2, which is adjacent to the SSSI of Fernhill Pastures, and a greater likelihood of tree removal with Route C1(A) in the vicinity of Hillyards Plantation and in crossing a dismantled railway line.
- 9B.87 On balance, Route C1(A) is preferred as the avoidance of proximity to settlements, and avoidance of a nature conservation designation of national importance (SSSI) is considered a greater benefit than avoidance of crossing Wat's Dyke Scheduled Monument. Direct effects on this linear feature can be avoided by careful siting of line supports.
- 9B.88 Option C1(A) is carried forward as the preferred western approach to Oswestry substation.

Comparison of Eastern Options through Zone C: C3 and C4

Comparison of Northern Parts of Routes C3 and C4 between St Martin's and Fernhill: C3 (north) and C4 (north)

- 9B.89 Between St Martin's and Fernhill, where the northern parts of routes C3 and C4 converge, there are relatively few environmental constraints affecting routeing. Both routes cross the Shropshire Union Canal, the main feature in this low-lying and relatively open landscape. Option C4 has a marginally greater effect on the canal, as it crosses at a more oblique angle than C3, and so is closer for a greater distance.
- 9B.90 Option C3 maintains a greater distance from the small settlements of Hindford and Henlle, although it is closer to several isolated farmsteads to the west of the canal. The village of Hindford has numerous mature trees, providing enclosure and screening views out, whereas Henlle and the several farmsteads to the west of the canal generally have elevated positions and open aspects. Option C3 north is likely to have a greater overall impact upon visual amenity from residential properties.
- 9B.91 South of Henlle, option C3 follows an alignment in close proximity to Fernhill Pastures SSSI, and runs alongside woodland adjacent to the designated site. Option C4 does not affect the SSSI.
- 9B.92 On balance, between St Martin's and Fernhill, **Option C4 (north) is preferred** over Option C3 (north), primarily for reasons of lower effects on visual amenity of residential properties.

Comparison of Southern Parts of Route C3 and C4 Between Fernhill and Oswestry: C3 (south) and C4 (south)

- 9B.93 Between Fernhill and Oswestry substation the key consideration is the effect upon Whittington village. Option C3 follows a route to the north and west of the settlement, whereas Option C4 skirts to the east and then south of the village.
- 9B.94 Option C3 is separated from the northern edge of Whittington by a narrow strip of woodland associated with a disused railway line, but is in close proximity to several properties on the western fringe of the village, including Drenwydd listed building. Option C4 generally maintains a greater distance from the edge of settlement.
- 9B.95 To the south and east of Whittington the landscape is less rolling and comprises larger fields with less tree cover in comparison with the landscape to the north of the village, making assimilation of an overhead line more difficult than in the more enclosed landscape typically characterising the study area.
- 9B.96 Option C3 utilises the route of a 33kV overhead line from north of Whittington to Oswestry substation, for a distance of approximately 2.5km. Much of this length is within the larger scale, more open landscape south of the A495 Whittington Road. In accordance with the routeing criteria, the lower voltage line is not taken into consideration at this stage. This is of relevance with regard to the visual amenity of several south-facing properties at Park Green, on the A495 and also of the listed building at Drenwydd.
- 9B.97 **Options C3 and C4 between Fernhill and Oswestry are finely balanced, with a slight preference for C4.**
- 9B.98 In the comparison of routes C3 with C4, a hybrid route option between St Martin's and Oswestry substation is directly comparable with C4. This comprises Option C3 from the zone boundary south to Henlle, with a short cross link to Option C1(B) north of Fernhill Pastures SSSI, and Option C1(B) from this point to Oswestry substation. This hybrid route would avoid the village of Whittington, a key consideration in this zone, and generally avoid proximity to property. In addition, this route would be shorter than option

C4, and the approach to Oswestry substation would be via underground cable, minimising visual intrusion. The benefits of avoiding proximity to Whittington are considered greater than the disbenefits of route option C3, which relate to effects upon visual amenity from scattered residential properties in the vicinity of New Marton and Henlle.

9B.99 In the overall comparison of Options C3 and C4, **the hybrid of C3 with C1(B) is preferred**. This forms the preferred eastern approach to Oswestry substation.

Comparison of Western and Eastern Routeing Strategies

9B.100 Comparison on a zone by zone basis has resulted in two coherent routeing strategies (or overall routes from Legacy to Oswestry), a western route, A1-B5-C1(A), and an eastern route, A1-B2-C3+C1(B). A summary of the comparison of these strategies is presented in Table 9B.2 below.

Table 9B.2: Comparison of Western and Eastern Routeing Strategies

Aspect	Route A1/ B5/C1(A) Western Option	Route A1/ B2/C3+C1(B) Eastern Option	Preferred Strategy
Effects on settlement	Generally routed away from settlements	Effects on eastern edge of St Martin's	Western
Effects on designated landscapes	6.5km through SLA;	4.5km through SLA; 0.3km through essential setting of Erbistock Registered Parkland	Western
Effects on cultural heritage	Crosses Wat's Dyke x1 and parallels Scheduled Monument Area for 0.5km Cable route crosses Offa's Dyke Proximity to Bryn House and Great Fernhill listed buildings	Within 0.5km of Erbistock Conservation Area Crosses Wat's Dyke x1 Cable route crosses Offa's Dyke Proximity to 3 listed buildings at Sodylt Hall and Great Fernhill listed building	Western
Effects on landscape character/landform	Generally routed through undulating terrain with plentiful mature tree cover. Impact upon Ceiriog valley.	Relatively open, low-lying landscape west of New Marton - route less easily assimilated within these landscapes. Central section (river crossing) routed within estate-influenced Maelor landscape – unspoilt parkland of high scenic quality.	Western
Effects on trees and woodlands	May require tree removal crossing River Ceiriog, Bramble Wood (x 2), adjacent disused railway line and Hillyards Plantation	No tree removal identified	Eastern
Effects on nature conservation designations	Crosses River Dee SAC x 2 (Dee and Ceiriog) Crosses LNR at Ifton Meadows	Crosses River Dee SAC x 1 (Dee) Immediately adjacent Fernhill Pastures SSSI	Eastern

Aspect	Route A1/ B5/C1(A) Western Option	Route A1/ B2/C3+C1(B) Eastern Option	Preferred Strategy
Effects on recreation/tourism	No direct effects on interests	Affects well –used footpath adjacent river Dee from Boat Inn PH; angling interests	Western
Route length	19.6km wood pole 3.0km cable	20.0km wood pole 3.0km cable	Western

9B.101 The western strategy is the preferred option. It follows a route generally sympathetic to local topography and woodlands, through an undulating landscape in which a wood pole line will be easily assimilated. The eastern route would pass through more open, flatter landscapes such as the area between New Marton and Henlle, and the estate-influenced parkland landscape in the vicinity of Erbistock, Manley Hall and Sodylt Hall. Both of these landscape types are considered less able to effectively assimilate a power line of the type proposed.

9B.102 Avoiding potential effects upon settlements is one of the most important aspects of comparing the options. The western route avoids all settlements, whilst the eastern route may have effects upon the eastern edges of St Martin's village (although there may be potential to confirm a route at a greater distance from this settlement than the indicative alignment). Although the comparison is finely balanced, the western option will have marginally less impact upon visual amenity.

9B.103 Other disadvantages of the eastern option relate to cultural heritage and tourism/recreational interests in the vicinity of Erbistock in particular. The essential setting of a registered parkland is considered a national designation (although non-statutory) and therefore is accorded greater weight than the local landscape designation (which is affected to a greater extent by the western option). However, it may be possible to deviate the route to avoid the essential setting of Erbistock Registered Parkland, and also to minimise any effects on angling interests in the vicinity of Erbistock.

Future connections

9B.104 The western option is considered the preferred alternative for reinforcement of the Legacy to Oswestry 132kV power distribution line, when there is no requirement to provide a connection to Chirk. The case for proposing a western route is strengthened if a future connection to Chirk is required, as this is likely to involve a substantially shorter length of power line (and hence environmental disbenefits) than a connection to a more easterly route.

The Preferred Route at consultation

9B.105 The assessment of alternative options indicated a preference for a route comprising a combination of A1 with the western river crossing B1(C) – B5 - C1(A). This combination is based on a balanced decision considering all environmental aspects required to create an entire connection from Legacy to Oswestry. It was considered that this combination offered the 'preferred route' to be taken forward within the consultation process.

9B.106 Overall, the preferred route avoided settlements, areas of high amenity, cultural or nature conservation value, whilst maximising the potential of the existing landform and vegetation for screening purposes.

9B.107 The line of the preferred route at public consultation, A1-B1(C)-B5-C1(A), is shown on Figure 9.6.

Comparison of sub-options

Comparison of Route B1 Options in Vicinity of Wynnstay Park: B1(A), B1(B), and B1(C)

9B.108 Route B1 has three sub-options in the vicinity of Wynnstay Park and Park Eyton. The key issue is the effect upon Wynnstay Park Registered Parkland and its associated setting, which needs to be balanced against the increased effect on visual amenity of residential properties likely if the line is routed around the parkland. The situation is further complicated by the presence of two existing high voltage overhead lines in the vicinity, which take a direct north-south route across the drive connecting Park Eyton Lodge with Wynnstay Park (which is part of the registered parkland) and through the Essential Setting of the parkland. They are located approximately 0.25km west of Argoed Farm. There is a Scheduled Monument at Argoed Farm. Park Eyton Lodge, The Kennels (both associated with Wynnstay Hall) and Bryn House are listed buildings.

9B.109 Route B1(A) is the most direct, taking a broadly north to south route approximately 0.3km east of the existing 132kV and 400kV overhead lines, and crossing both a short section of the Registered Parkland and a greater extent of its Essential Setting. This option may have some effect on the setting of the Scheduled Monument at Argoed Farm, (and upon the visual amenity of the farmhouse, which has views south and eastwards) although the route would be partially backgrounded by The Drive Wood in views eastwards from Argoed.

9B.110 Route B1(C) is the longest and least direct, avoiding the Essential Setting of the park. It is likely to have the greatest effect of these sub-options upon the visual amenity and setting of The Kennels and Bryn House, but would have little effect upon Park Eyton Lodge or Argoed Farm. In taking a route south-eastwards to Park Eyton and then south-westwards, this route is the least sympathetic of the three options to the local topography, which is a series of gentle ridges and intervening hollows, orientated in a north-south direction. It also takes a route through more open land than the other options.

9B.111 Option B1(B) takes the middle route, geographically, crossing the short section of Registered Parkland at the same point as Option B1(A). It would have a similar effect upon the Scheduled Monument and listed buildings as Option B1(A). The route alignment alongside The Drive Wood is considered to offer a greater extent of backgrounding (in views from the road network including the A539) than the more direct option, and so Option B1(B) is preferred to B1(A).

9B.112 Although it is less sympathetic to local topography, and introduces potential effects on the setting of two listed buildings, Option B1(C) is preferred as it does not affect the Registered Parkland or its Essential Setting, and it avoids Argoed Farm and Scheduled Monument.

9B.113 Option B1(C) is the preferred option in the vicinity of Wynnstay Park.

Comparison of Route B3 Options Crossing the River Dee: B3(A) and B3(B)

9B.114 Route B3 has two options in the vicinity of the river Dee crossing. Option B3(B) takes a route to cross from north to south of the river, following an alignment sympathetic to local landform, and utilising existing woodlands for backgrounding, particularly north of the river. Option B3(A) takes a more direct and open route over a local ridgeline north of its river crossing point.

9B.115 Although both river crossing points have been selected to minimise riverside tree loss, option B3(B) would cross Sodylt Wood, an area of Ancient Semi-Natural Woodland, managed by the Woodland Trust.

9B.116 Option B3(B) would be routed close to four listed buildings, Wyffydd and three buildings in the vicinity of Sodylt Hall, which B3(A) would not affect.

9B.117 The recreational route Llwybr Maelor Way follows minor lanes on the southern bank of the Dee. Option B3(B) would cross it twice in the vicinity of Sodylt and closely parallel the path for approximately 1km. The route of this option on the upper bank of the Dee would provide little opportunity for backgrounding (Sodylt Wood is at a lower level) and so is likely to affect views westwards over the Dee valley from the footpath. Option B3(A) would have a lesser effect, crossing the path once at 90 degrees.

9B.118 A variation of B3(B), running alongside the northern bank of the Dee and crossing at the same point as option B3(A), rather than crossing east of Lower Farm, is considered preferable to B3(B) in terms of overall visibility from the surrounding area and effect upon Sodylt Hall buildings. It would, however, be closely aligned with a public right of way alongside the Dee on its northern bank. Option B3(A) provides a more direct crossing of the Dee valley, and is considered to have the lesser impact upon visual amenity of footpath users, listed buildings and residential properties.

9B.119 Option B3(A) is the preferred option for Route B3 crossing the River Dee.

Comparison of Route C1 Options in the River Perry Valley: C1(A) and C1(B)

9B.120 To the east of Gobowen, Option C1 has two options to negotiate a way through the Hillyards Plantation and Fernhill Pastures and other woodlands and meadows associated with the shallow valley of the river Perry.

9B.121 Option C1(A) takes the most direct route across the valley, following the western edge of Hillyards Plantation and maintaining distance from the few properties in the vicinity. Option C1(B) is routed further east, avoiding Hillyards Plantation and crossing the valley immediately adjacent to Fernhill Pastures, a SSSI. Option C1(B) crosses three minor lanes and would be within closer proximity to isolated properties (less than 5) than Option C1(A).

9B.122 On this basis, Option C(1)A is preferred as it has lower effects on views and avoids Fernhill Pastures SSSI. An additional consideration is that Option C1(A) occupies the route of an existing low voltage (33kV) overhead line for approximately 1km, and accommodating the higher voltage overhead line may require tree removal from the small plantation to the west of Hillyards Plantation. However this was not considered to be sufficient to change the preferred option from C1(A) to C1(B).

9B.123 The preferred option for Route C1 in the River Perry Valley is C1(A).

